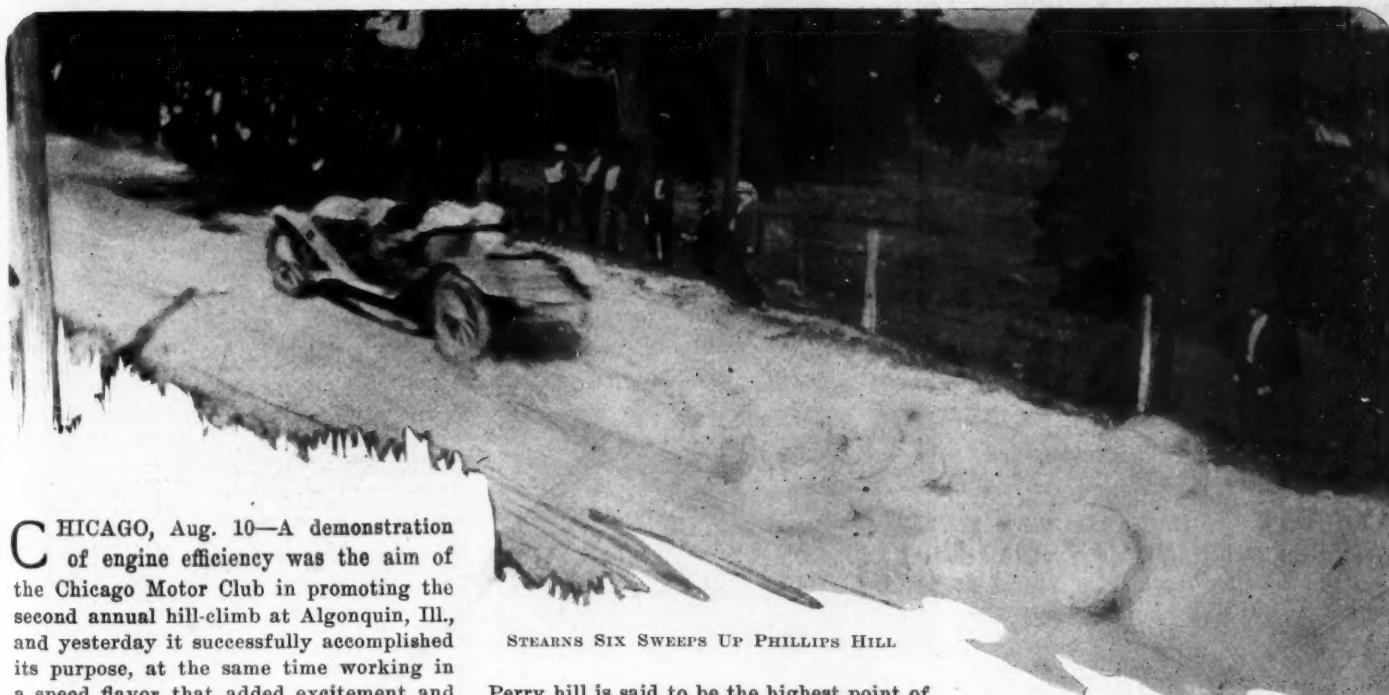


MOTOR AGE

SENSATIONS AT ALGONQUIN HILL-CLIMB



STEARNS SIX SWEEPS UP PHILLIPS HILL

CHICAGO, Aug. 10—A demonstration of engine efficiency was the aim of the Chicago Motor Club in promoting the second annual hill-climb at Algonquin, Ill., and yesterday it successfully accomplished its purpose, at the same time working in a speed flavor that added excitement and spice to the affair. The trials were most successful and the results apparently satisfied everyone, for there has not been any grumbling heard since the conclusion of the affair.

The climb was unique in that it differs from other events of the kind promoted in this country, the results being decided on a handicap formula which is in general use in Great Britain, but which was used first in this country by the Chicagoans, who tried the formula last year with great success. This handicap proposition is designed to bring out the best in a motor, the results being arrived at by multiplying the cylinder dimensions by the time and dividing the result by the weight of the car with driver. Touring cars are allowed 250 pounds over the roadsters. In another way the Algonquin affair differs from others in that it is a double climb, Perry hill being used for a standing start effort in the morning and Phillips hill for the flying start trials in the afternoon. They are not separate events, the percentages acquired on both hills being added, which gives the cars their final rating.

Perry hill is said to be the highest point of land in the state of Illinois, and the distance climbed, from tape to tape, was 1,146½ feet. The hill is a terror and defies high-gear efforts, for the run to the first turn is so short that even the big cars cannot show much more than 30 miles an hour to the turn. After the bend comes a straight run to another turn near the top of the stiff grade.

Phillips Hill measures 2,592½ feet and the take-off is about a quarter of a mile. The hill is designed to produce speed, having only one turn near the top. That it was speedy was shown by the fact that the big cars like the Apperson Jackrabbit and the Stearns six went up it at 53 miles an hour.

The classification was made according to piston area, which was arrived at by squaring the bore and multiplying by the number of cylinders. Except in one or two instances this brought the cars into the classes in which they belonged and resulted in a pretty fight of the motors. Class 1 was for cars with a piston area under 35 inches, and three competed—two Autocars and a Holsman. The Autocar

won, as it did in the same class last year. Class 2 was for cars with a piston area ranging from 35 to 50 inches, and in this event the Buick landed the honors from the Maxwell and the Reliable Dayton. The Columbia shone in class 3, for cars with piston area 50 inches and under 65. The Columbia also made the unique record of being the only car making the fastest time in its class and winning under the handicap formula.

Class 4 brought together cars whose motors had piston areas running from 65 to 90 inches and in this the Moon, entered and driven by Harry Branstetter, led the field. Class 5 was for the big cars with motors running over 90 inches, and in this the Pierce-Arrow, which won the big class a year ago, came off first best, with the Berliet a good second. The free-for-all was settled on a straight time basis, and four gasoline cars and three electrics battled for the glory. Of course the fight for first was among the gasoline rigs, but at the same time the three electrics entered by the Woods Motor Vehicle Co. made a



AT THE TOP OF PHILLIPS HILL HUNDREDS OF CARS WERE LINED UP AND MADE GRAND STAND SEATS

showing that was particularly pleasing to the admirers of this type. In this event a tie resulted. The Stearns six made the best showing in the morning, leading the Apperson Jackrabbit, entered and driven by Phil Kirk, by a fifth of a second. The tables were turned in the afternoon when Kirk beat his rival, Leland, by the same margin. Both wanted to run off the tie, but the course by this time was in such a cut-up condition and the road was so overrun by spectators that Referee Donald considered it too dangerous to risk a possible accident, so the tie was allowed to stand and the honors divided.

There had been two protests filed before the climbs started, the Stearns people claiming the Apperson Jackrabbits did not come up to catalogue specifications in that the Kirk car had no muffler, that the mud guards, light rubber ones, were not regulation and that the Van Sicklen Apperson was not equipped with a muffler. The Packard made a protest against one of the Berliets, asserting that the runabout body which had been fitted to a chassis borrowed from a customer was not stock. After the climb the Stearns people withdrew the protest against the Appersons, but the Packard objection will be investigated by the referee. There was some talk that because of the power and speed shown by the Stearns six that the cylinder capacity of the motor was 6 by 6 inches;

but this was set at rest today when Chairman Root, of the contest committee, and Chairman Beecroft, of the technical committee, made an official examination of the Stearns motor and found the measurements to be 5½ and 5¾ inches as claimed.

The results furnished much in the way



READY TO GIVE THE SIGNAL

of information concerning the efficiency of the engines competing. The idea was to show what the various engines could do in the way of carrying loads up the hills, and so, of course, time was not the most important factor, for it was argued that while a light, fast car might get up the hills in better time than its heavier rivals, the latter might show greater engine efficiency by pulling their greater loads up in as good time, with the handicap formula applied. Working on this basis the Columbia came through the test with great credit to itself and its makers. The car was a 24-horsepower four-cylinder machine, with a 4½-inch bore and a 4½-inch stroke. It was in class 3, in which it not only made the fastest time but also won its class. Its percentage was lower than that of any of the other thirty-one cars.

That the formula is a good one and produces true results was shown by the fact that second to the Columbia in engine efficiency was the Pierce-Arrow, also a class winner. Third was a Buick, which also won its event, while fourth was a Moon,

also a class winner. Taking this angle of the competition into consideration, the rating of the motors was as follows:

Pos. Car number and class	Per cent
1—Columbia, No. 1, class 3.....	7.14
2—Pierce-Arrow, No. 30, class 5.....	8.07
3—Buick, No. 5, class 2.....	8.11
4—Moon, No. 22 A, class 4.....	8.513
5—Berliet, No. 26, class 5.....	8.68
6—Stearns, No. 28, class 5.....	8.796
7—Berliet, No. 10, class 3.....	8.98
8—Buick, No. 16, class 4.....	9.183
9—Haynes, No. 17, class 4.....	9.23
10—Autocar, No. 19, class 4.....	9.30
11—Corbin, No. 18, class 4.....	9.69
12—Jackson, No. 12, class 3.....	9.71
13—Autocar, No. 3, class 1.....	10.065
14—Mitchell, No. 13, class 4.....	10.254
15—Berliet, No. 33, class 5.....	10.62
16—Maxwell, No. 4, class 2.....	11.011
17—Jackson, No. 7, class 3.....	11.06
18—Apperson, No. 27, class 5.....	11.184
19—Gale, No. 9, class 3.....	11.34
20—Stearns, No. 34, class 5.....	11.50
21—Packard, No. 32, class 5.....	12.036
22—Haynes, No. 24, class 5.....	12.04
23—Stearns, No. 25, class 5.....	12.234
24—Rambler, No. 29, class 5.....	12.42
25—Oldsmobile, No. 22, class 4.....	12.49
26—Pierce-Racine, No. 14, class 4.....	13.076
27—Autocar, No. 1, class 1.....	13.505
28—Apperson, No. 23, class 5.....	13.837
29—Matheson, No. 31.....	14.32
30—Holzman, No. 2, class 1.....	14.65
31—Reliable Dayton, No. 6, class 2.....	15.68
32—Rambler, No. 20, class 4.....	16.173

Out of the original forty-two entries all but three came to the tape, those scratched being a Rambler, Pope-Hartford and a Jackson, which was considered good and as bearing out the wisdom of the Chicago Motor Club in putting on a \$30 fee with \$15 returned in case the car started. This unique fee was applied in order that there should be few if any scratches.

From a time standpoint the climb was most successful, for the old records were



TELEPHONING TIME TO STARTER



STARTER HAYDEN AT THE TELEPHONE



KIRK FINISHING ON PERRY HILL

wiped out with ease. The Stearns six-cylinder, which was rushed here by express from Atlantic City, did the best work in this respect, cutting the Perry hill mark from 34 seconds to 26½ seconds, and lowering the Phillips hill record from 46½ seconds to 33½ seconds. Others also beat the old marks. The Apperson Jack-rabbit, driven by Phil Kirk, did 27½ and 28 seconds on Perry and 33½ and 33½ seconds on Phillips. The Van Sicklen Jackrabbit did 32 seconds on Perry and 40 and 45 seconds on Phillips. The Pierce-Arrow registered 44 seconds on Phillips hill. The Stearns four-cylinder went up Perry hill in 32 and 34 seconds, while on the other incline it made 39½ and 40 seconds. The Packard Thirty clocked 44½ up Phillips hill, while the Van Sicklen Jackrabbit did 45 and 41½ on the long ascent in the afternoon.

The efforts of the three electrics attracted considerable attention, and compared favorably with the time made by some of the gasoline cars. Up Perry hill in the morning the electric driven by F. J. Newman showed 53 seconds, time which beat that of twelve gasoline cars. The other two also did well. The two high-wheeled rigs, the Holsman and Reliable Dayton, performed consistently.

The climb attracted fully as many people as it did the year before. The chief charm of this event is the 50-mile drive to

the scene of action. The climb starts early in the morning and in consequence the majority of the contestants and spectators from Chicago have to go out the night before. Of course most of them use motor cars for conveyances and therefore the small towns around Algonquin are crowded over night. It is impossible for all to be accommodated in Algonquin, so many stop in Elgin, driving the 10 miles the next morning. This time was no exception to the rule and those who made Algonquin their night's stop had a lively time of it. They owned the town, and Mayor Chewning was a most agreeable host. The grumpy hotelkeeper was still in evidence, though, and while he had been tamed somewhat he came far from making a hit with the motorists. Indeed, it is hinted that there is some danger of Algonquin losing the hill-climb next year if that hotelkeeper does not mend his ways and give the visitors the glad hand.

The drive to Algonquin is a most beautiful one, especially from Elgin, from which



STEARNS FINISHING ON PERRY HILL

had a pleasant day and a half in the country, with fine drives coming and going, not to forget the sensations of the hill-climbing itself.

Algonquin really got its first taste of the invasion on Wednesday, when some of the contestants arrived to work on the hills. Thursday more came and the town woke up. At the instigation of the Chicago Motor Club efforts had been made to improve the two hills. At the foot off Perry hill the old wooden bridge was torn down and in its place a new stone structure was put up. This work was not completed until Thursday, which somewhat hampered the contestants in their training. Also the Chicago Motor Club had agreed to pay for work put in improving the hills, it being deemed necessary to bank the bottom turn on Perry hill and the bend on Phillips. But the Algonquinetes were poor road menders, and when the motor club people got there Thursday afternoon they found it necessary to take a hand themselves. Perry hill had been repaired by scraping loose sod and stones on it and the turn at the top was in such condition that a car traveling at speed had hard work holding it. The motorists got busy at this spot and for 2 hours they labored, the result being that the hill was in fine shape for the climb the next morning. Phillips hill was not so bad, but the surface on the turn was soft and, as results

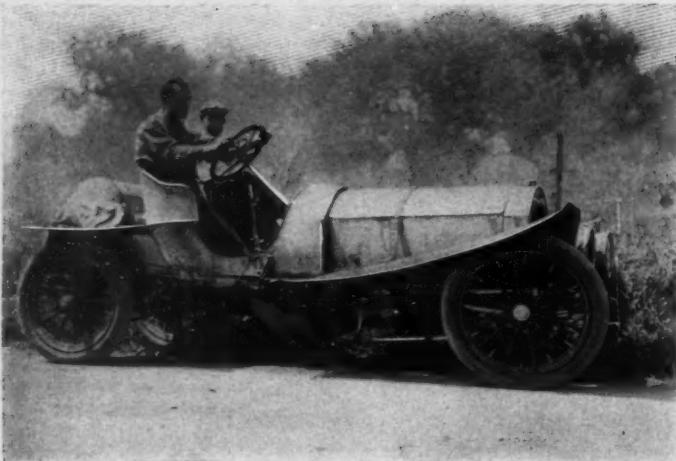


WHERE THE OFFICIALS WORKED

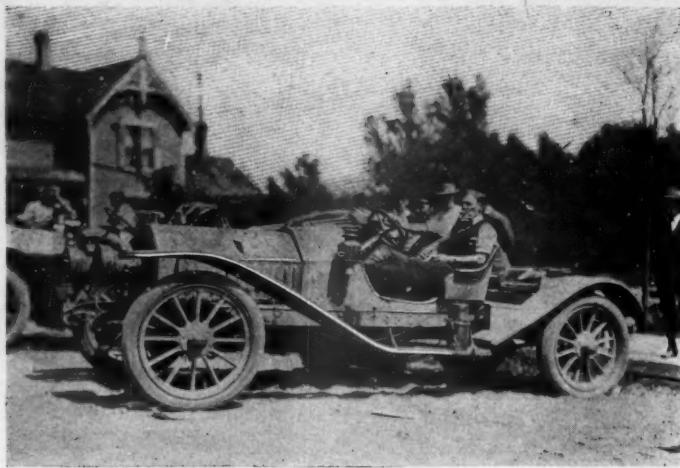
point the road follows the Fox river, being up on a high bluff most of the way and giving lovers of fine scenery a full meal. The town of Algonquin nestles in a valley and the chief industry is making condensed milk and going to the postoffice for mail. But the motorists enjoyed the relaxation from the strenuous city life and



AN INDUSTRIOUS FARMER, AIDED BY A DEPUTY SHERIFF, MADE MONEY RENTING PARKING SPACES



PHIL KIRK IN THE BIG APPERSON JACKRABBIT



FRANK LELAND IN THE STEARNS SIX

proved, could not stand the churning and cutting up it got from the big cars taking the hills at 53 miles an hour.

Another improvement made was in the timing apparatus. A year ago an electric bell was deemed sufficient, but it proved better in theory than in practice, as the officials found in the morning on Perry hill. The wires had been strung along the barbed wire fence and in consequence was short-circuited when the spectators pressed against the fence. This made it necessary to abandon the bell and time the cars by means of a wigwag system which did not always prove accurate, causing several protests against this system. Warned by this experience, the Chicago Motor Club this year installed a regular telephone system in addition to the electric bell. This was put in by Frank Wood, an Elgin motor car dealer, and the city electrician of that town. This business-like way of doing it proved a success and there was not the slightest bit of trouble in this department of the climb.

There was only one accident and that occurred during the practice on Thursday afternoon, when the Apperson Jackrabbit, driven by Phil Kirk, hit a Maxwell runabout. In the little car was W. B. Jameson, superintendent of the Maxwell plant at Grand Crossing, and his 11-year-old son, Robert, home from school in Bos-

ton. Contrary to road rules, the cars kept to the left on Phillips hill, where the going was best. The Maxwell had started up and was sticking to the left. The Apperson started a few seconds later and, going 50 miles an hour, caught up to the Maxwell just after it had crossed the starting line. Jameson tried to give the Jackrabbit the right of way and started to cut across to the extreme right. Kirk tried to get around him on that side, the result being the big car caught the runabout a glancing blow, lifting the rear wheels off the ground and converting it into a wheelbarrow. It pushed the Maxwell into a clump of trees at the right of the road and these trees saved the car from overturning. Neither Jameson nor his son was injured, but David Beecroft, chairman of the technical committee, who was sitting on the floor board of the Jack, sprained an ankle in the mixup. The Maxwell escaped from the melee with two broken rear wheels and a few slight injuries, but was fixed up so it was driven home the next day.

Contestants and spectators were up with the lark on Friday morning and at 8:30 o'clock the officials started weighing in the cars. This was done on the scales of the Borden Milk Co., and every precaution was taken to secure accuracy. The committee even went so far as to stamp each motor, so in case of a protest it would be

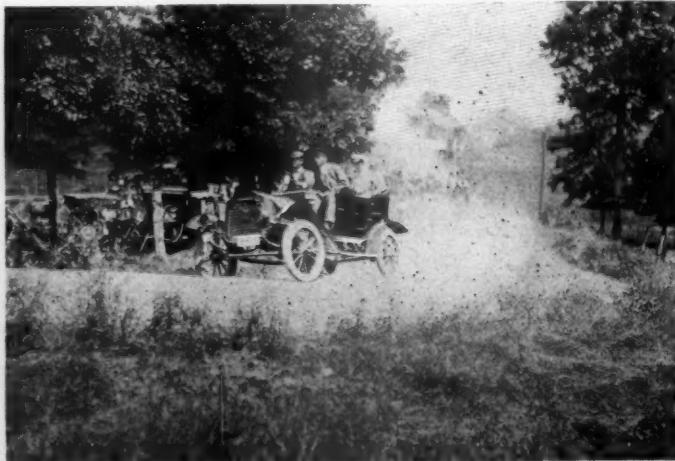
possible to identify the engine as the one used in the climb. Happily there was no occasion to make use of this system of identification, for no protests were filed as to cylinder dimensions. This work accomplished, everyone moved to Perry hill for the standing start climb.

At top and bottom of this incline the spectators gathered. At the top an enterprising farmer threw open his 8-acre lot and gathered in a bunch of money by allowing the spectators to park their cars in his lot at 25 cents each. This bit of high finance nearly caused trouble, for the owner of the field at the bottom of the hill had not thought of the scheme until his lot was packed. However, the motorists took pity on him and passed the hat for his benefit, so he did not fare so badly after all.

The climb did not get exciting until the big class had its inning. Then the excitement started. Naturally all eyes were turned on the two Jackrabbits and the Stearns six and the faith pinned to these cars was not misapplied. Leland in the Stearns six started ahead of his rival and he went up the grade in $26\frac{1}{2}$ seconds. Then everyone waited for the pink Apperson driven by Kirk. It was a strenuous task set for him and he missed the mark by $1\frac{1}{2}$ seconds, but still so much better than the record that everyone looked for



VAUGHN'S AUTOCAR FIRST TO START



FIRST TURN ON PERRY HILL—THE GALE



BERLIER TAKING TURN ON PHILLIPS' HILL



LAST LONG PULL ON PHILLIPS HILL

something sensational in the free-for-all in which the two cars were booked to again clash. But the star event did not produce any time to beat the 26½ seconds. The pink Apperson did better—27½ seconds—but the Stearns slowed some, beating the Apperson, however. The Stearns' time was 27½, which gave it a fifth of a second lead over the Apperson for the battle in the afternoon. This clash was the feature of the morning.

In the afternoon, after everyone had eaten, the proceedings started on Phillips hill on the other side of town. As before, everyone waited for the battle of the Stearns and the Apperson, although all would have been satisfied without that, for the fight for the honors in the various classes was exciting at all times. In class 1 the Autocar held the advantage it had gained in the morning and James Levy had the satisfaction of running one, two. The Buick, in class 2, also held its lead and was returned a winner. The Moon did the same thing, as did the Pierce-Arrow in class 5.

In class 5 the spectators had a chance to get a line on what they might expect in the free-for-all. The Stearns six went up the hill in 33½ and the pink Apperson in 33½. This showed how evenly the two cars were matched. This pace equaled 53 miles an hour, which was considered marvelous going when the grade and turn

were considered. The turn was a bad one for the light, fast cars, which skidded and bounded the entire width of the road going around it. This was the danger point and the wonder is someone was not hurt here.

Despite the wonderful time of the two star cars they failed to make up their handicap in class 5 and the Pierce-Arrow easily held its own, just as Henry Paulman and J. V. Lawrence had calculated it would do after its showing on the morning hill. This decided, there was a brief intermission to allow the cars at the top of the hill to descend. Then the battle for the free-for-all took place.

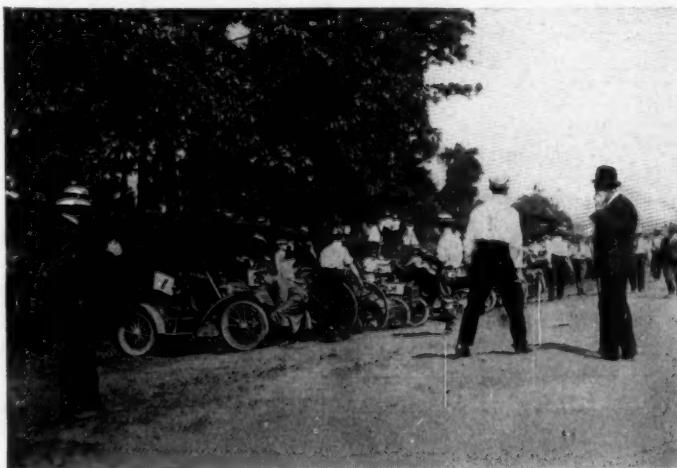
Again the Stearns six was first to come up. There was a general craning of necks on the part of those at the top of the hill as the roar of the engine was heard the other side of the turn. Around the bend Leland came, his speed being so great the car only was touching the high spots and threatening every minute to go into the ditch. Just as Leland straightened up for the last 200 yards dash to the wire the tire on the right rear wheel came off and started to roll along on its own accord, keeping pace with the car itself. How Leland held the road only he himself knows, but he did and he flashed across the tape in 34 seconds. The tire kept rolling and went into the crowd, hitting one man, scaring him more than it hurt.

Following Leland came Kirk, and while

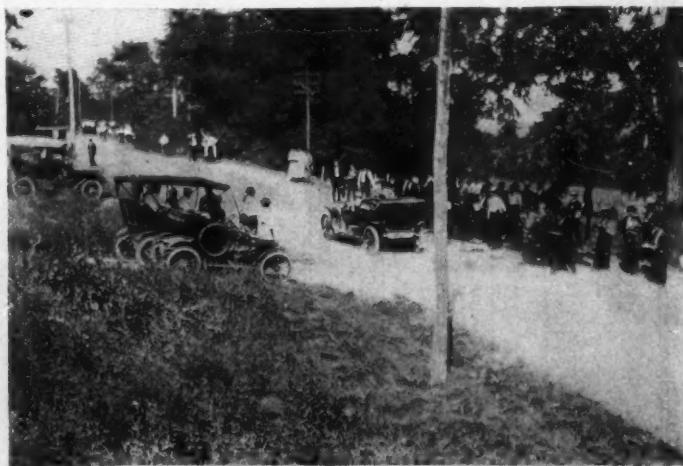
the Apperson did not shed a tire it made an even more sensational turn, being 930 pounds lighter, and in consequence it was much harder to hold it to the ground. But Kirk got around and he made a beautiful finish out of it, the clocks in the hands of G. G. Greenburg, C. E. Gregory and H. S. Michaels showing :33½ seconds, which made the total times of the two cars an exact tie.

Neither driver was satisfied with this result and both wanted to run off the tie. But by this time the spectators had flocked into the road, cars had started to drive down and it seemed an impossibility to clear the course. Besides, the turn by this time was so frightfully cut up that it clearly was out of the question to send the cars up the hill again, so Referee Donald called it a draw.

Other cars performed in a manner that would have attracted attention had not their luster been dimmed by the Stearns six and the Apperson. The Van Sicklen Apperson and the Stearns four-cylinder both made time that would have been considered grand under different conditions. The Stearns four was a touring car and carried its full load of passengers. Despite this it cut the old records in each one of its four climbs. Now that the climb has passed into history the motor club is preparing for its next event—the economy run which will take place in September.



STARTERS LINED UP FOR MORNING CLIMB



HALF WAY UP ON PHILLIPS HILL

RESULTS IN ANNUAL HILL-CLIMB OF CHICAGO MOTOR CLUB AT ALGONQUIN, ILL.

CLASS 1—Piston Area under 35

No.	Car	Horse Power	No. Cyl.	Bore and Cylinder Capacity	Piston Area	Weight	Tires	Entrant	Driver
3	Autocar.....	12	2	4x4	100.63	32	Fisk	James Levy.....	James Levy.....
	Autocar.....	12	2	4x4	100.63	32	Fisk	James Levy.....	Jamer Levy.....
2	Holman.....	10	2	4x4	100.63	32	Firesone	Holman Automobile Co.....	J. M. Renegar.....

CLASS 2—Piston Area 35 and under 50

No.	Car	Horse Power	No. Cyl.	Bore and Cylinder Capacity	Piston Area	Weight	Tires	Entrant	Driver
5	Buick.....	22	2	4x4	169.043	40.5	2260	International	E. L. Weiant
4	Maxwell.....	20-14	2	4x4	127.2344	40.5	1410	International	A. Holman
	Reliable Dayton	12	2	4x4	120.26	38.25	1660	Pennsylvania.....	J. Bleyleting
6	Columbia.....	24	4	4x4	213.63	64	2745	Diamond	P. Bellew
11	Berliet.....	22	4	4x4	231.35	62.1	3362	Michelin	P. Odell
12	Jackson.....	20-24	2	5x5	216.476	55.12	2250	Diamond	R. Purcell
7	Jackson.....	20-24	2	5x5	216.475	55.12	2250	Morgan & Wright	O. J. Kulp
9	Gale	26	2	5x5	201.34	60.5	2675	Morgan & Wright	D. W. Cook

CLASS 3—Piston Area 50 and under 65

No.	Car	Horse Power	No. Cyl.	Bore and Cylinder Capacity	Piston Area	Weight	Tires	Entrant	Driver
11	Moon.....	30-36	4	4x4	266.774	81	3115	Fisk	H. P. Branstetter
16	Buick.....	24	4	4x4	255.34	72.26	2980	International	H. D. Trumbull
17	Haynes.....	30	4	4x6	283.71	72.26	2796	Diamond	Frank Nutt
19	Autocar.....	30	4	4x4	256.35	72.26	2860	Fisk	James Levy
18	Corbin.....	24-30	4	4x4	270.3731	81	2945	Diamond	Bird Sykes Co
19	Mitchell.....	35	4	1x5	318.0986	81	2950	Dunlop	G. V. Rogers
22	Oldsmobile.....	35-40	4	4x4	302.18	81	2875	G & J Goodyear	G. F. Bamford
14	Pierce-Arrow.....	40	4	4x5	349.89	81	3125	Ford	L. F. Stevens
20	Rambler.....	26-30	4	4x4	286.274	81	2900	Fisk	T. B. Jeffery & Co

CLASS 4—Piston Area 65 and under 90

No.	Car	Horse Power	No. Cyl.	Bore and Cylinder Capacity	Piston Area	Weight	Tires	Entrant	Driver
22a	Moon.....	30-36	4	4x4	266.774	81	3115	Fisk	Branstetter Motor Co
16	Buick.....	24	4	4x4	255.34	72.26	2980	International	Bullock Motor Co
17	Haynes.....	30	4	4x6	283.71	72.26	2796	Diamond	Frank Nutt
19	Autocar.....	30	4	4x4	256.35	72.26	2860	Fisk	James Levy
18	Corbin.....	24-30	4	4x4	270.3731	81	2945	Diamond	Bird Sykes Co
19	Mitchell.....	35	4	1x5	318.0986	81	2950	Dunlop	G. V. Rogers
22	Oldsmobile.....	35-40	4	4x4	302.18	81	2875	G & J Goodyear	G. F. Bamford
14	Pierce-Arrow.....	40	4	4x5	349.89	81	3125	Ford	L. F. Stevens
20	Rambler.....	26-30	4	4x4	286.274	81	2900	Fisk	T. B. Jeffery & Co

CLASS 5—Piston Area 90 and Over

No.	Car	Horse Power	No. Cyl.	Bore and Cylinder Capacity	Piston Area	Weight	Tires	Entrant	Driver
30	Pierce-Arrow.....	40-45	4	5x6	431.97	100	3865	Goodrich	H. Paulman & Co
26	Berliet.....	40	4	4x5	388.86	90.25	3820	Diamond	H. W. Shaw
28	Sterns.....	45	4	4x5	533.22	115.66	3905	Diamond	W. W. Shaw
32	Berliet.....	40	4	4x5	389.85	90.25	3154	Fisk	J. W. Martien
33	Apperson.....	60-65	4	4x5	518.84	132.25	4080	Diamond	J. W. Martien
34	Sterns.....	40	4	5x6	533.22	115.66	3800	Diamond	Phil Kirk
32	Packard.....	30	4	5x5	431.97	100	3726	Diamond	Roy F. York
24	Haynes.....	50	4	6x6	670.2	121	3870	Diamond	C. L. Johnson
26	Sterns.....	45	6	5x5	431.97	100	3065	Goodrich	Frank Nutt
29	Rambler.....	35-40	4	5x5	475.172	121	2875	M & W	F. W. Leland
33	Apperson.....	50	4	6x6	475.172	144	4530	Diamond	T. B. Jeffery & Co
31	Matheson	60	4	6x6	678.58	144			C. F. Van Sieklen

CLASS 6—Free-for-All

No.	Car	Horse Power	No. Cyl.	Bore and Cylinder Capacity	Piston Area	Weight	Tires	Entrant	Driver
36	Stearns.....	45	6	6x5	799.88	173.34	3870	Diamond	F. W. Leland
37	Apperson.....	60-65	4	6x5	519.34	132.25	121	M & W	F. W. Leland
36	Apperson.....	50	4	6x5	476.172	115.66	2975	Diamond	C. F. Van Sieklen
38	Sterns.....	45	4	5x5	533.22	115.66	4080	Goodrich-Palmer	C. F. Van Sieklen
41	Woods electric.....	3	3	...	...	...	...	Firestone	F. J. Newman
39	Woods electric.....	3	3	...	...	...	...	Diamond	H. J. Peterson
40	Woods electric.....	3	3	...	...	...	...	Diamond	C. J. Metzger

PEERLESS WINS MILWAUKEE FREE-FOR-ALL

MILWAUKEE WIS., Aug. 11—Chicago had its big hill-climb Friday and yesterday Milwaukee had its inning with a similar event, taking the Windy City pace just as it did after the reliability run last June. In the latter affair Milwaukee used the rules the Chicago Motor Club drafted for the occasion, but yesterday it fell back into the old rut and used price classifications and straight time instead of piston area and a handicap formula as were in vogue at Algonquin. Apparently the Chicago way was a little too strenuous for the Cream City, but be that as it may the local affair was most successful, attracting a big crowd and escaping any accidents or protests during the afternoon.

The Milwaukee climb was held on Sentinel hill under the auspices of the newly formed Milwaukee Automobile Trade Association. Sentinel hill is at Fox Point and some 100 cars were on the scene of action, their owners having driven out to see the sport.

The hill was discovered by the Milwaukee Sentinel, which took a great interest in the climb and provided the trophy for the free-for-all. Because of this fact the incline was dubbed Sentinel hill. It is 864 feet in length, a turn at

the bottom being somewhat on the order of the first bend on Perry hill at Algonquin. In consequence few tried the high gear all the way. In fact, the two Jacksons were the only ones which went up on the high. One of them was a two-cylinder and the other a four. The grade most of the way is about 15 per cent and this resulted in low gears being used.

Fourteen cars took part in the free-for-all for the Sentinel cup and of this lot the Peerless roadster, entered by the Jones Automobile Co., proved speediest, going up the grade in 29½ seconds, 1½ seconds better than achieved by the Wayne. The speed of the Peerless was 25 miles an hour. The Wayne and Rambler also gave good accounts of themselves in this affair.

In addition to the free-for-all there were seven other events run on price classification. In six of them the trophies were put up by the trade association, while the Schandein cup was offered for competition among stock cars and runabouts listing at \$1,350 and under. Class 1 was for cars listing at \$850 and under and brought together the Ford, Maxwell and Cadillac. It was an easy victory for the Ford, which skinned up the hill in 46 2-5 seconds, beating the Maxwell

13 3-5 seconds and the Cadillac 23 3-5 seconds. Nine cars took part in the climb for the Schandein cup and the winner turned up in the Jackson two-cylinder runabout, which attracted attention by taking the grade on its high and doing 31 1-5 seconds, more than 10 seconds better than its nearest competitor, the Buick cars.

The Buick had an inning in the next event, the class for cars listing at \$2,000 and under, in which it beat the Mason, Jackson, Cadillac, Franklin and Mitchell. The Pope-Hartford came into the lime-light in class 4, in which it defeated the Rambler, Wayne, Ford and Mitchell.

The Rambler established a record in class 5, for stock touring cars listing at over \$3,000, in which it went up in 33 2-5 seconds, the best time of the day for a touring car. This was less than 4 seconds slower than the time put up by the Peerless in the free-for-all. The Rambler scalps included the Pope-Hartford, Marmon, Ford and Berliet.

Only two faced the starter in Class 6, which was for stock roadsters and runabouts listing at \$2,000 and under. One of them was a Jackson and the other a Hay-Berg. Neither one made very fast time, but the Jackson defeated its rival.

RESULTS OF MILWAUKEE DEALERS' CLIMB UP THE SENTINEL HILL

CLASS 1—TRADE ASSOCIATION CUP

Open to stock runabouts and touring cars listing at
\$850 and under

No.	Entry	H. P.	Entrant	Time
1—Ford	14—16	Curtis Auto Co.	46%	
2—Maxwell	14	E. F. Sanger Co.	60	
3—Cadillac	10	Jonas Automobile Co.	70	

CLASS 2—THE SCHANDEIN CUP

Open to stock runabouts and touring cars listing at
\$1,350 and under

No.	Entry	H. P.	Entrant	Time
11—Jackson	24	Auto-Exchange	31½	
5—Buick	22	Bates-Odenbrett Co.	41½	
1—Ford	14—16	Curtis Automobile Co.	45%	
4—Mason	24—28	Solliday Motor Car Co.	45%	
7—Mason	24—28	Solliday Motor Car Co.	50	
6—Mitchell	20	Brown-Friend Motor Co.	54%	
8—Cartercar	24	Hickman, Kraemer & Croll Co.	54%	
9—Maxwell	20	E. F. Sanger Co.	55%	
10—Reo	16	Curtis Auto Co.	61½	

CLASS 3—TRADE ASSOCIATION CUP

Open to stock touring cars only listing at \$2,000 and under

No.	Entry	H. P.	Entrant	Time
5—Buick	22	Bates-Odenbrett Co.	56%	
4—Mason	24—28	Solliday Motor Car Co.	44	
16—Jackson	30	Auto Exchange	45	
17—Cadillac	30	Jonas Automobile Co.	50	
12—Buick	24	Bates-Odenbrett Co.	41½	
13—Mitchell	35	Brown-Friend Motor Co.	No finish	
7—Mason	24—28	Solliday Motor Car Co.	58%	
14—Franklin	12	Sanger Automobile Co.	61½	

CLASS 4—TRADE ASSOCIATION CUP

Open to stock touring cars only listing at \$3,000 and under

No.	Entry	H. P.	Entrant	Time
19—Pope-Hartford	25—30	Welch Brothers	35	
18—Rambler	35—40	A. W. Shattuck	35%	

25—Wayne	30—35	Solliday Motor Car Co.	38½
21—Ford	40	Curtis Auto Co.	39½
13—Mitchell	35	Brown-Friend Motor Co.	54½

CLASS 5—TRADE ASSOCIATION CUP

Open to stock touring cars only listing over \$3,000

No.	Entry	H. P.	Entrant	Time
18—Rambler	35—40	A. W. Shattuck	33%	
19—Pope-Hartford	25—30	Welch Brothers	35	
22—Marmon	35	John Ure, Jr.	41	
21—Ford	40	Curtis Auto Co.	41	
35—Berliet	40	L. Fitch	42½	

CLASS 6—TRADE ASSOCIATION CUP

Open to stock roadsters and runabouts listing at \$2,000 and under

No.	Entry	H. P.	Entrant	Time
27—Jackson	24	Auto Exchange	49%	
22—Hay-Berg	20	Hay-Berg Motor Car Co.	55%	

CLASS 7—TRADE ASSOCIATION CUP

Open to stock roadsters and runabouts listing over \$2,000

No.	Entry	H. P.	Entrant	Time
23—Peerless	30—40	Jonas Auto Co.	29%	
26—Craig-Toledo	40	Clinton A. Parks	39%	
20—Wayne	30—35	Solliday Motor Car Co.	47%	

FREE FOR ALL—THE SENTINEL TROPHY

No.	Entry	H. P.	Entrant	Time
23—Peerless	30	Jonas Auto Co.	29%	
11—Jackson	24	Auto Exchange	30%	
20—Wayne	30—35	Solliday Motor Car Co.	32½	
18—Rambler	35—40	A. W. Shattuck	32%	
16—Jackson	30	Auto Exchange	35%	
19—Pope-Hartford	25—30	Welch Brothers	36	
21—Ford	40	Curtis Auto Co.	41	
5—Buick	22	Bates-Odenbrett Co.	42%	
22—Marmon	35	John Ure, Jr.	43½	
7—Mason	24—28	Solliday Motor Car Co.	44	
4—Mason	24—28	Solliday Motor Car Co.	44½	
25—Wayne	30—35	Solliday Motor Car Co.	53%	
24—Pope-Toledo	20—24	H. H. Cutler	58%	
13—Mitchell	35	Brown-Friend Motor Co.	63%	

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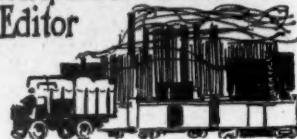


MOTOR AGE

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EFFICIENCY CALCULATIONS

CUSTOM has figured to a large extent in the conduct of many of the motor car contests that have been held in this country, and so custom may be blamed for whatever lack of progressiveness there is to be found here. It remained for Chicagoans to depart from ordinary lines in an effort to ascertain the capabilities of the cars that are regularly offered the public and which are touted in an effort to dispose of them in exchange for good hard-earned money. Abroad there has always been an effort to improve and to find something that will more clearly show what cars can do under different conditions, and Chicago, believing this to be good policy, followed suit and laid out a formula for determining hill-climb results that was at least different from any that has been used in this country. The cars were classed according to piston area and in the reckoning the rule to determine merit marks was to multiply the cylinder capacity by the time, in seconds, taken to climb the hill and divide by the weight of the car with the driver. A short, steep and curving hill was used in the morning, the cars being given a standing start; in the afternoon a flying start was given the cars to negotiate a longer but more moderate hill, and the average work on the hills determined the winner. The rules appeared too technical for some, but in defense of the system the management points to the record, which shows that the winners in the four classes arranged were the first four on the list in point of percentage of engine efficiency, clearly showing that fundamentally at least the rule was reasonably correct and fair. In any handicap event it is impossible to correctly place all contestants without making as many classes as there are entrants, but as the result of the Chicago hill-climb shows the rule applied seems to have been responsible for determining results with as much accuracy as could be reasonably expected considering the fact that there are all sizes and all prices and consequently all grades of motor cars pitted against one another. With constant effort on the part of promoters of motor car contests to ascertain some rule that will permit a fair comparison between the different makes and the different grades of cars something may be evolved that will approach the point of perfection. It must be remembered that it is essential that comparisons be made and that the comparisons must be based not alone on what speed cars can show or

what loads they will carry or how long they will stand up or how well they will run, but on a combination of speed in relation to ton miles—of course, taking into consideration the factors of strength and reliability, points that have been too frequently overlooked in this country because of the one desire to secure as much advertising value in such events as possible. Only a week ago Motor Age pointed out that those who take part in such contests solely for individual advertising gain do themselves and the industry no great amount of good; that good from such contests will come only when there is a desire and an effort to advertise the motor car business as a whole. Such contests are for the benefit of the industry alone.

SPREADING FALSE RUMORS

FALSE RUMOR is always a busy body and through peculiar methods is apt to do considerable harm in a community. Rumor has of late been doing more or less harm in the motor car industry. There have been several instances where reports have been circulated that certain well-established concerns have been having difficulty in weathering the little storms that naturally appear in the heavens from time to time. Happily so far no great amount of damage has resulted, but that is no guarantee that dire results will not be encountered. Rumors are dangerous things at best and possibly because of their known danger are handled with all the more recklessness. Trade rivalry is apt to be the cause of magnifying first and spreading afterward some of the rumors that now and then creep out, with the ultimate result of causing a descent upon an unaware but substantially sound debtor, suddenly engulfing him and swamping him before he can gain his balance and swim out of the breakers that have washed over him. No army can withstand shots from its own soldiers; shooting will do to fight the enemy, but there the fighting must end. These trade weakness rumors have as a rule been without foundation in some instances and with very little in other cases; but being carried by a strong wind, as they naturally are, they may do almost incalculable harm.



A WAIL FROM THE EAST



EEK before last Motor Age told its readers what it thought concerning the negligence of the Three A's in not giving the Glidden tour proper recognition at the moment of its completion in New York city. Motor World—which is a motor car paper published at 154 Nassau street, New York, N. Y.—took offense. Like all provincial papers it made the common mistake of thinking it owns the town in which it pays rent, and that criticism of the palpable New York frigidity was a reflection on itself. Hence the latter molecule of the metropolitan newspaper directory spent its very best ability to toss the English language in true juggler style, with the evident purpose of condoning Manhattan's shortcomings by accusing Motor Age of being responsible for the ice cream freezer reception given the Gliddenites in Chicago. Let it be known among the dozen and a half people who read Motor World that Motor Age is published in Chicago and is glad of it. But, let it also be known that Motor Age is not responsible for the shortcomings of a club; that Chicago herself turned out bravely along Michigan boulevard to welcome the Gliddenites; that the Motor Age office boy was down on the curb waving his hat and yelling "Welcome to our city." Motor Age admits it knows more about the vernacular than it does about the brand of insincere and flippant diction which floats almost unread and unnoticed from the typewriter of the hard-working copy machine at 154 Nassau street. This is because Motor Age lives among and with the people and not in the scholarly suburbs of Auto-land—with quotation marks around scholarly. Motor Age went on the Glidden tour, soul and body, and to the tune of several thousand dollars. Motor World hired a second-hand story from a daily newspaper writer. Motor Age felt the Glidden tour and knew its heart beats, its real purpose, its shortcomings, its success and its inner being. Motor World stayed at 154 Nassau street and wondered what manner of men it might be who had the nerve to pay for linotype composition which reflected upon the sanctity of Broadway, the near neighbor of 154 Nassau street. Motor Age wishes to repeat that it was unworthy the American Automobile Association that after the Glidden tour had seen such welcomes enroute, it should drive its final miles up Broadway to the tune of "Lost in a Great City."

CURRENT COMMENT



AUTHORITIES throughout the country are beginning to realize that motor cars are such dust-raisers that it is necessary to pay some attention to their roads so as to relieve the people from the dust nuisance as well as to prevent the road surfaces from disappearing with the wind. It is not an uncommon thing nowadays to see miles of highways oiled in some manner to keep down the dust. Incidentally it has been discovered that this oiling process is about as good a means, considering the cost, as can be found for preserving the surfaces of the roads, and as a result the habit of oiling the roads is spreading, much to the satisfaction of those in favor of good roads and also to those who happen to live close enough to the highways to receive the benefit of all the dust that is raised. Seattle and Syracuse have been experimenting with satisfactory results and now propose to go into the oil business more extensively than ever. This is a point to which other communities will have to come sooner or later and the quicker they realize it the quicker they will begin saving what they have in the line of roads.

FLORIDA by no means has so secure a hold on the midwinter racing game as might be supposed, for there are other candidates which have beaches to offer to the motor car racing enthusiasts and Charleston, S. C., is one of them. Here there is a beach said to be even superior to

that found in Florida, and so long as it is a good deal nearer New York it ought to come in for at least a little fair consideration on the part of the promoters of the winter races—providing the promoters are not too closely allied with the hotel interests in Florida. If the American Automobile Association assumes the management then Charleston may yet obtain a little consideration if it goes after it hard enough to cause the powers that be to realize that it means business.

NOW that Prince Borghese has completed the task of driving and hauling a car from Pekin to Paris, he will be in a position to tell a lot about motoring and motor cars that will make decidedly interesting reading—and perhaps there will be some things he will not tell that might be still more interesting. The prince ought to be in a position to feel free to tell all he has learned and without other remuneration than space rates.

HOOISIERS are not slow—not by any means. They have improved methods in handling the scorchers. The police of Indianapolis possess a steam car and they parade up and down all the good streets of the Indiana capital laying for the speed bugs. The police wagon is a hustler and has all sorts of things on it for the purpose of telling how fast the offender is going. The authorities usually land their victim—if he doesn't stop he is forced into the curb, and there are a few other little tricks up the sleeves of the steaming sleuths, so scorching in Indianapolis is not at all attractive nowadays.

NEW YORK has just held a 24-hour race, under the new rules set by the American Automobile Association—and there was no scandal about it, either. This illustrates the fact that there need be no scandal if the governing body sets its foot down and says there shall be no nonsense about the racing game and insists that promoters shall prove reliable and responsible before sanctions to run meets are given. Whatever truth there may have been in the reports about the Chicago affair it certainly did some good—it stirred up the racing board to the extent that there is assurance there will not be a repetition of the affair.

SENATOR MORGAN has another scheme—to abolish railroad grade crossings and to compel drivers of all vehicles to carry lighted lamps at night. Neither

scheme is new, even if the senator is responsible for its late presentation. The universal light proposition was made years ago, before Duryea was much of a motorist, even; but it never went past the point of talk. And there has been a fight to abolish grade crossings for the past quarter of a century. Both are desirable, but neither will see the light of day if the senator depends upon the motoring bodies to carry out the work, judging by what has been accomplished.

ACCORDING to the vernacular, London sort of put it over New York when it formed the New York Cab Co. and floated all or nearly all the stock. The Britisher evidently learned how to do a little promoting from Charles T. Yerkes and proposes to treat Americans as Americans have treated him; he is to operate a cab line in New York on a big scale, evidently seeing some pretty big profits. There has been a motor cab service in New York for a number of years and it has never paid, but there have been such changes in motor building that a new venture along the cab line is pretty apt to turn a good profit to the share holders.

LET it be hoped that the financial troubles that have been thrust upon the Pope company may not turn out as bad as they naturally appear when a receiver has been appointed. The fact that the company refuses to make a statement precludes the possibility of making comment.

COMING MOTOR EVENTS

Chicago Economy Test—Second annual economy test of the Chicago Motor Club and Chicago Automobile Trade Association, September 6 or September 13.

St. Louis Reliability Run—Automobile Club of St. Louis 90-mile reliability run for owners only, September 14.

A. C. A. Show—Automobile Club of America's annual show at Grand Central palace, New York, week of October 24-31.

New York Show—A. L. A. M. show, Madison Square garden, October 31 to November 7. Marcus L. Brock, 7 East Forty-second street, New York.

Chicago Shows—Eighth annual Chicago show, Coliseum, and first commercial vehicle show at Seventh Regiment armory, both November 30 to December 7. S. A. Miles, manager, 7 East Forty-second street, New York.

Importers' Show—Importers' Automobile Salon exhibit of pleasure and commercial vehicles in Madison Square garden, New York, December 28-January 4.

Chicago Commercial Test—First annual test of commercial cars, Chicago Motor Club, November 30 to December 7.

THE WEEK IN BRIEF

Handicap hill-climb of Chicago Motor Club at Algonquin, Ill., proves success; Autocar, Buick, Columbia, Moon and Pierce-Arrow are class winners, while the Apperson Jackrabbit and Stearns six-cylinder tie in free-for-all in which they climb hill at 53 miles an hour.

Milwaukee has climb up Sentinel hill, feature being free-for-all, which is won by Peerless roadster; Ford, Pope-Hartford, Rambler, Buick and Jackson other winners.

New York gets its first taste of 24-hour racing, contest being held on Brighton Beach track, Thomas Flyer winning with 997 miles, with Lozier second and Jackson third.

President Gillis, of Autocar Co., denies his concern in financial difficulties, issuing statement on situation.

Federal officials issue statement showing United States ranks second to France as an exporter of motor cars.

Indianapolis adopts new method of stopping scorchers, sending officers out in motor car to run down the offenders; scheme proves most practical.

Prince Borghese, in Flat, is first to arrive in Paris, completing trip from Pekin to French metropolis.

Pope Mfg. Co. in hands of receiver; Albert L. Pope appointed.

NEW YORK 24 IS WON BY THOMAS

Montague Roberts Drives Flyer to Victory at Brighton Beach, Doing 997 Miles, a New One-Car Record—Jackson Has Hard Luck at Finish of Contest

New York, Aug. 10—Montague Roberts, driving Harry S. Houpt's 60-horsepower Thomas Flyer, won the 24-hour track race, which ended at the Brighton Beach mile running course at 10 minutes past 11 o'clock tonight. His score was 997 miles, a new record for one-car competition, which was 164 miles farther than the record holder, Robert Burman, drove his Jackson car to victory in the 24-hour race at St. Louis on July 4 last. Throughout the long day and night journey Roberts insisted on handling the wheel and levers alone, though he had for mechanics Gus Guichard, who rode with George Heath when he won the Vanderbilt cup, and for a short time William McIlvrid, another driver of the Houpt stable, in itself a notable long-distance racing feat. Roberts' substantial reward for his victory was \$1,000 in cash put up by the United States Motor Racing Association, the promoter of the 2-days' meet at Brighton Beach.

Fifteen miles behind the Thomas came a 40-horsepower Lozier, piloted by L. W. Smelzer and Theodore Lynch, with a score of 972 miles. Robert Burman and H. H. Cobe finished third in a 40-horsepower Jackson which, owing to an unlucky accident, had made but 3 miles the last hour and was laid up in the camp when the race was brought to a close.

There were but three other surviving cars at the end of the race which had kept up the running during the entire 24 hours. They were a 35-horsepower Mitchell driven by F. Zirbes and E. W. Hudson, fourth; a 50-horsepower Delahaye with Ralph Mongini at the wheel, fifth, and a 50-horsepower Darracq piloted by Lewis Nuneman and William McCalla, sixth. The other nine of the fifteen original starters had given up the race at intervals ranging from 6 to 18 hours.

Accidents had eliminated before the seventh hour three cars, which had been leaders in the early part of the struggle—a Lozier, a Frayer-Miller and a Pilain. From this point on the battle had been among the trio that finally evolved one, two, three at the end. It would be perhaps more correct to state that the contest had resolved itself into a duel between the Thomas and the Jackson, for the survivor of the Lozier pair would have without doubt been forced to remain in third place to the finish had not a luckless mishap sent the Jackson to the camp for good nearly an hour before the race ended.

From daylight on the Thomas had been in hot and relentless pursuit of the Jackson with margins of from 20 to 30 miles separating them according to their relative speed and their tire repair hindrances.

Of the latter the Thomas had far the worse luck, the handling of its repairs being notably slower than that of the Jackson, from which it is fair to infer that Roberts' mount had the greater speed. This was an evident fact besides, which was very apparent in the tactics pursued by the New Yorker in allowing the westerner to pull away on the stretches and then coming up on the pole and forcing him into rough going on the outside on the turns to increase the strain on a front axle in apparent difficulties.

Despite its bad axle the Jackson held its own wonderfully well until it came time for the lamps to be lighted. At 8 o'clock, however, Roberts had got within 6 miles of Cobe and the tame racing of the afternoon was enlivened by a stern chase that seemed likely to prove successful.

Now the Thomas began to have troubles of an exasperating character that had naught to do with the car itself. Its tail lights, which under the rules of the race had to be lighted, began to go out. Roberts would spurt and be on the eve of gaining a lap when he would be flagged by an official and made to stop while his lamps were lit. This happened continuously, probably not fewer than eight or ten times, so that every lap gained was quickly lost. It was afterward explained by Harry Houpt that the lights were out so far behind that the draft blew them out every time. Finally McIlvrid lighted a lantern and held it over the rear seat.

The Jackson, on its part, was not free from ill-luck; for in the twenty-third hour it had to stop to mend a broken valve. Besides this it was twice flagged by the officials through mistaking it for another car needing lights relit. The climax of its troubles came when just as the last hour was entered a screw in the timing gear dropped out. It was impossible to retime the engine and Burman and Cobe had to stand by the trackside and not only watch the Thomas pass to victory, but also see the Lozier creep by into second place.

It was the first chance New Yorkers had had to pass nearby judgment on the new style of racing. The general public, which filled the great stand and swarmed over the stretch in front on both evenings and to the extent of several thousand each afternoon, howled with enthusiasm and unfeigned glee in true 6-day bicycle race fashion. The meet had been liberally advertised and extensively noticed by the newspapers. Probably 20,000 paid the dollar admission fee—3,000 Friday afternoon, 5,000 on Friday night, 5,000 during Saturday daytime and 7,000 Saturday night. The promoters, however, put the

paid admissions at 12,000. The fans were rather inclined to the opinion that despite fifteen starters the chances were in favor of the race resolving itself into a dull procession, as it had this afternoon, and were in favor next time of the relay idea being given a trial as better assuring continuous exciting racing.

There was no question of the fair running of the present contest and there was no dispute over the scoring. The Long Island Automobile Club had joined in the promotion and furnished the three referees, who were C. J. Edwards, Frank G. Webb and R. G. Kelsey. The other officials were equally well known and trustworthy. The scoring was done at the suggestion of A. R. Pardington by indicators for each car such as are used in tallying calls in a telephone office. They were operated by the referee and timers. The track had been put in fine condition, how good may be judged from Walter Christie's exhibition mile in 54½ seconds. The lighting was also satisfactory. Red lanterns marked the turn, calcium lights were cast in the direction of the running and arc lights were used besides. All these, added to the acetylene lamps in front and tail lights in the rear of the cars, made racing at night comparatively safe, though the cars were out of view most of the way on the back stretch.

There were fifteen starters in the 24-hour race. They included four imported cars—a Delahaye, a Darracq, a de Dietrich and a Pilain. The last named was manned by Louis Strong, Walter Christie's former mechanic, who rode with him in the grand prix. Fred Wagner's pistol sent them away at 10:20 o'clock last night. Danger was apprehended at the first turn in the rush for the lead, but the drivers took no risk and rounded it safely. When they straightened out there was racing for the honor of scoring the first lap, which was won by the Frayer-Miller in 1 minute 21½ seconds. The cars soon strung out and swung by singly and in bunches in endless procession. At all times there was the glare of headlights rounding the turn and moving swiftly down the home stretch, while on the far side one caught glimpses of flying red side and tail lights. Michener set out to do business with the Lozier from the start and led the procession at 20 miles in 25 minutes 35 seconds. Stuerwald in the Oldsmobile No. 14 was in racing humor, too, and soon the pair had opened a considerable gap on their pursuers. They were in the lead at the end of the first hour with 46 miles to their credit and a gap of 3 miles separating them from the Frayer-Miller. Lawrence was not satisfied, however, to be a trailer and in the second hour caught the leaders, passed them and was in the van at the close of the second hour.

The first of the thrillers the general public had been promised occurred early in the third hour. The steering knuckle of

the Lozier broke and it dashed through the fence. Michener and Mulford escaped uninjured, but the car was put out of the running temporarily. It appeared later and added 73 miles to its score.

A more serious accident occurred a few minutes later, when the rim and several spokes of the Pilain left the hub and rolled at high speed into a crowd of oft-warned rubber-necks.

The next to succumb to the dangers of the racing game was the Frayer-Miller, which had been the leader from the second hour. In rounding the first turn of the course in the sixth hour with a lead of nearly 20 miles over the Jackson, Lawwell swung wide to get by the de Dietrich, when his right front tire exploded. The car swerved into the outer rail, putting its rear axle out of commission.

Nor was this the last of the calamities of the first night, for in filling the gasoline tanks of the Welch in the camp enclosure a spark caused a flare-up of flame which nearly put the Welch out for all time and badly burned an attending mechanic. Later, however, to everyone's surprise the car returned to the contest. The score at 5 hours was: No. 6, Frayer-Miller, 236 miles; 7, Jackson, 217; 2, Thomas, 205; 3, Lozier, 199; 14, Oldsmobile, 187; 8, Welch, 172; 10, Pilain, 166; 12, de Dietrich, 160; 5, Mitchell, 149; 11, Darracq, 133; 9, Delahaye, 126; 15, Oldsmobile, 112; 30, Matheson, 107; 17, Stoddard-Dayton, 51.

A triangular duel among the Jackson, the Thomas and the surviving Lozier began in the seventh hour and continued to the end of the contest. In the tenth hour the Lozier got on even terms with the Thomas. At this time, however, it seemed a hopeless stern chase, for the Jackson led them by 36 miles. By the ninth hour Fuller had had enough of it and withdrew the de Dietrich with 311 miles to its credit. The Pilain also was formally withdrawn in this hour with 219 miles. A new wheel had been put on and some 50 miles more run with it before Strang decided the chase hopeless and threw up the sponge.

Ryall had been having a lot of trouble with his Matheson. C. A. Singer, Jr., keen always for a race, had ordered the

60-horsepower stock touring car taken from the floor and started in the race as an added entry. Its utter lack of tuning up put on its driver a heavy handicap and retreats beneath the grand stand for adjustments were necessary. The score for 12 hours was: No. 7, Jackson, 532 miles; 2, Thomas, 509; 3, Lozier, 497; 14, Oldsmobile, 399; 5, Mitchell, 394; 11, Darracq, 390; 8, Welch, 371; 30, Matheson, 338; 9, Delahaye, 267; 15, Oldsmobile, 194; 17, Stoddard-Dayton, 190.

The racing during the afternoon was monotonous. There were big gaps between the trio of leaders and at no time were there more than half a dozen cars on the course at once. The only interest to the game was the jockeying of the Jackson on the turns by Roberts, who believed the Jackson's axle weak and was trying to give the car the worst of the going in the rough ruts on the outside. Wise ones, however, were confident that though the Jackson's tubular axle might bend it would still carry the car. The score for 18 hours: No. 7, Jackson, 779 miles; 2, Thomas, 752; 3, Lozier, 718; 5, Mitchell, 565; 11, Darracq, 565; 14, Oldsmobile, 502; 8, Welch, 446.

The track had become deep with soft earth at the turns and in rounding them the cars sent up great clouds of dust. Voice was given to much apprehension of danger from this cause when night came on. The officials finally decided to take no risks and called a halt at 5:20 o'clock, lining the contesting cars up along the grand stand fence and prohibiting any repairs or adjustments being made. During the long rest the track was thoroughly watered and there was no further trouble from dust.

A snappy program of short and middle-distance races was run off in the afternoon and during the early evening preceding the start of the 24-hour race. The mile time trials made by Walter Christie during the afternoon in his grand prix racer went to prove into what excellent condition the superintendent had gotten the course. Brighton Beach at its best is by no means as fast as the Empire City circuit, yet Christie scored a mile in 54½ seconds.

The principal event of the afternoon was the Brighton Beach middle-distance derby at 100 miles. It had for starters J. B. Ryall, Matheson; F. O. Fuller, de Dietrich; Guy Vaughan, Stearns; H. Michener, Lozier; William McIlvrid, Thomas Forty; A. J. Ditman, Studebaker, and Stewart H. Elliott, Packard.

Vaughan, who had easily been a winner in all the preceding races, started off at once to make a runaway of it with the Stearns. For 45 miles he ran in the lead until he broke a connection on his gasoline pipe and had to go to camp to repair it. Then Elliott, who had gotten into second place with the Packard in the nineteenth mile, took up the pacing and held the lead until he, too, had to go to camp on

the fifty-ninth mile. In the meantime Vaughan had repaired his pipe and was once more in warm pursuit. With Elliott off the course Vaughan got the lead again and Elliott was 4 miles behind when he got the Packard going again. The Lozier and the Studebaker also led the Packard.

Just after completing his eighty-first mile Vaughan was forced to retire through a broken chain. At 90 miles Elliott had passed the Studebaker and was chasing Michener. At this point Vaughan returned, but was too far back to be dangerous any more. Michener won in 2 hours 6 minutes 21 seconds, with Elliott second in 2 hours 12 minutes. Ditman had covered 99 miles; McIlvrid, 98 miles, and Vaughan, 96 miles.

The intermediate running and times were:

Miles	First	Second	Time
10	Stearns	Matheson	11:16 3-5
20	Stearns	Packard	23:07 3-5
30	Stearns	Packard	34:38
40	Stearns	Packard	46:23
50	Packard	Lozier	57:50 2-5
60	Stearns	Lozier	1:20:18 4-5
70	Stearns	Lozier	1:31:30 4-5
80	Stearns	Lozier	1:43:02
90	Lozier	Packard	1:56:52
100	Lozier	Packard	2:06:21

The first race on the card was a 10-mile event for roadsters and had four starters: Guy Vaughan, Stearns; Louis Strang, Pilain, and Rutherford, Peerless. Vaughan lapped Strang in the sixth mile and caught Rutherford the next lap. It took 3 miles of racing, however, before he got away from the Peerless. Vaughan won by 1½ miles in 11 minutes 23 seconds; Strang, 13 minutes 16½ seconds; Rutherford, 13 minutes 20½ seconds.

Three drivers lined up for the \$250 offered for the winner of the 5-mile race. This time Vaughan drove his Stearns for what it had in it and beat J. B. Ryall, Matheson, by a quarter of a mile in 5 minutes 11 seconds. F. O. Fuller in a de Dietrich was third.

It had been intended to run a 50-mile race in the evening preceding the start of the 24-hour contest, but owing to lateness and delay in reaching the post the referee cut the distance to 25 miles. Stewart Elliott, Packard, had no trouble in defeating the two cars that went against him, beating a Studebaker, driven by A. J. Ditman, by a lap in 32 minutes 27 seconds.

SCORE AT THE END OF 24 HOURS

Car	H. P.	Drivers	Miles Hrs.
Thomas	60	M. Roberts	997 24
Lozier	40	Smealzer-Lynch	972 24
Jackson	40	Burman-Cope	966 24
Mitchell	35	Zirbes Hudson	744 24
Delahaye	45	Mongini	560 24
Darracq	50	Nuneman-McCalla	720 24
Oldsmobile	35	Sturwold-Anderson	502 18
Welch	50	Trewin-Greenwood	446 18
Matheson	50	Ryall	392 17
De Dietrich	50	Fuller	311 9
Frayer-Miller	—	Lawwell-Knepper	269 6
Oldsmobile	35	Michener-Mufford	177
Pilain	28	Strang	219 9
*Lozier	40	Howard-Thomason	216 13
Stoddard-D.	35	L. and J. Light	271 17

* Made 104 miles in 3 hours. Returned later.

A Studebaker driven by A. J. Ditman and J. A. Holm started at about 11 a. m. Saturday and covered 264 miles before its drivers concluded to retire.

SCORE OF THE LEADERS BY HOURS

Hour	First	Record
1—No. 4 Lozier	46	...
2—Frayer-Miller	94	
3—Frayer-Miller	143	...
4—Frayer-Miller	185	
5—Frayer-Miller	236	...
6—Frayer-Miller	268	
7—Jackson	308	...
8—Jackson	354	
9—Jackson	402	...
10—Jackson	450	...
11—Jackson	489	
12—Jackson	532	449
13—Jackson	580	488
14—Jackson	615	522
15—Jackson	654	557
16—Jackson	681	589
17—Jackson	733	618
18—Jackson	779	652
19—Jackson	810	682
20—Jackson	848	710
21—Jackson	878	744
22—Jackson	920	775
23—Jackson	963	802
24—Thomas	997	883

GILLIS DENIES RUMORS

Autocar Co. President Issues Statement—Claims Concern Is Not Financially Worried

Philadelphia, Pa., Aug. 8—Indefinite rumors as to the alleged unstable financial conditions of the Autocar Co. having been in circulation for some time, the Motor Age representative started out on a still hunt today to run the reports down. It was a long, hot trail, which finally led to Ardmore factory and the private office of President Gillis. The whistle was just blowing for the lunch hour, and Ardmore's usually quiet streets became instantly alive as the hordes of grimy artisans left the hot factory—the majority of them for near-by homes, the remainder to seek the shade of the trees or lawns which surround the general offices, where they proceeded to discuss the contents of their dinner kettles.

President Gillis is a busy man, but when the reporter's card was sent up to him he willingly granted an interview. He listened attentively to his interrogator's opening remarks about the rumors, and admitted he had heard something of them.

"Is the present condition of the company's finances such as to warrant these rumors?" he was asked.

"No," was the reply. "The Autocar company is as sound as a dollar. It is discounting its bills and paying cash when it considers it advantageous to do so. I knew reports inimical to the company were in circulation, for some time ago a western concern from which the Autocar company had been buying largely advised me it could not fill a large order which had been sent a day or two before. A check for the entire amount of the Autocar indebtedness had been mailed this concern the day before, and must have reached it a few hours after its refusal to honor the Autocar order which had been mailed. The next day the St. Louis concern advised me that it was prepared to fill the order, but I countermanded it. The Autocar company is paying its tire bills—discounting them—on the 10th and 25th of each month, and taking advantage of discounts wherever possible. But wait. I think an official statement would have a good effect in counteracting any bad results from these rumors." And sitting down at his desk President Gillis indited the following: "The Autocar company's financial condition is most satisfactory at the present time. Arrangements have been recently made which enable it to pay cash for all goods, and it is taking advantage of discounts. It is not working a large force at the present time, as it has a large part of its 1908 product machined and practically ready for assembling, holding up such parts only as may possibly be changed slightly. Its 1908 models will probably be the same as the 1907, with the

exception of the new roadster, which is just being put out.—H. A. Gillis."

"There, I think that will be strong enough," said the Autocar president as he handed the statement over.

"Can you recall any action of your company which may have given rise to these rumors?" Mr. Gillis was asked.

"Yes, several of them. The discharge of quite a number of hands is one. The company is so far ahead with its 1908 work—it long ago prepared for an output of 600 cars in all—that it found it could not carry the entire force and keep all hands busy. It therefore laid off quite a number, but still has a sufficient force to do the work laid out. Another probable source of such reports was the discharging of the factory superintendent; the reason for this action, while in line with the company's between-seasons retrenchment, really does not concern the public. The fact that R. G. Dun & Co. have frequently demanded a full statement of the Autocar company's affairs, and have met with a refusal in each instance may have had something to do with the uneasy feeling concerning our financial status.

"Still another reason may be that a few months ago the company secured a loan from a local bank and gave as security a number of 1906 cars, which had been selling rather slowly. These machines were turned over to the bank, which stored them in a warehouse which we rented to it, and placed them in charge of a warehouseman. This action, which was dictated by strict business economy—as we found we could just then use to excellent advantage the money tied up in these cars—was probably interpreted wrongly by the wise-aces.

"No; you can tell the Motor Age's readers that the Autocar company's finances are sound."

RACES IN RECORD TIME

North Yakima, Wash., July 28—A record on a circular track was broken at the race meet this afternoon under the auspices of the Northwest Automobile Track Association. L. Guy Mechlem, of Seattle, went after the mile record for racers weighing 850 pounds or less and which stood at 1 minute 5 seconds. He made three circuits, going the second mile in 1 minute 1 second and the third in 1 minute 2 seconds. Fechter's 35-horsepower Lambert touring car defeated Gauntt's 20-horsepower Cadillacs in a 3-mile race, as the latter broke down. In the 5-mile touring car race Gauntt's machine won easily in 7 minutes 33 seconds. Gauntt's car also proved victorious in the pursuit race. H. Mitchell, driving a Ford, won the 5-mile runabout event in 8 minutes 56 seconds. A match race between a Thomas Flyer, driven by Virgil Hall, and a Spider, driven by L. Guy Mechlem, resulted in a dead heat. This was decided in a mile race, won by the Flyer in 1 minute 7 seconds.

CATCH THE SCORCHERS

Indianapolis Police Adopt New Way of Running Down Violators of Speed Ordinances

Indianapolis, Ind., Aug. 12—There is a new game in Indianapolis, which, however, is not likely to prove popular. The police call it catch the scorchers, while the public, which has about \$4,000,000 invested in motor cars for pleasure in the city, call it by a variety of names. Of course there is considerable fun in the game else the police wouldn't bother with it. Three or four persons and a high-powered car can play the game, provided the former are well armed with revolvers. Run up on a dark boulevard about 10 p. m., wait in a shadow until a motor car filled with men and women comes along, then take out after the party at full speed. If the car does not stop, shoot holes in its tires, run it into the curbstone—but make it stop.

Such, at least, is the way the police methods of running down violators of the speed law appear to the motor folk themselves. Chief Robert Metzger's plan to run down motor cars with a motor car was put into effect last week and as a result several drivers have been arrested, although at great risk of injury.

Chief Metzger invited the Motor Age correspondent to have a seat in the White steamer owned by the police on its initial run after scorcher last Wednesday night.

Shortly before reaching Thirteenth street a Premier runabout, driven by Frank Morrison, shot past the steamer at a 20-mile pace and the police started in pursuit. The chase was a short one, for at Sixteenth street Morrison stopped in answer to a command, and the police car wedged him in toward the curb. One of the officers accompanied Morrison to police headquarters, where he was charged with fast driving.

With the two remaining officers the police car, after the Morrison arrest, ran up to Thirty-eighth street and Central avenue, a particularly tempting spot for motorists. It is here that motor cars usually shoot around the corner at a high speed returning from the Country Club, and there is a smooth stretch for nearly 3 miles over the North Capitol avenue boulevard. Barely had the steamer stopped in a shady spot when a big red car filled with two men and several women ran past at something more than a 20-mile rate, and the first exciting chase of the evening started. The car was driven by A. G. Snider, who evidently did not know the big black car back of him belonged to the police. A flash lamp was thrown on the police speed indicator and it showed 25 miles an hour. Rugenstein ran up to the side of Snider's car and yelled to him to stop. Snider either did not understand the command or he paid no attention to it,

for he failed to stop. Rugenstein began edging Snider closer and closer to the curb, still running at 20 miles an hour. Once or twice the cars came within 2 or 3 inches of each other and the women screamed. This seemed to rattle Snider, for he kept on. Rugenstein tried new tactics. He ran ahead of Snider, zig-zagged across the street and finally formed a wedge in front of Snider's car. The two cars came within a few inches of each other, then Snider stopped.

There were nine captures during the hour, the speed ranging from 20 to 42 miles an hour. In the police court all except two were fined the following morning, each being assessed \$1 and costs, or \$11. One man continued his case and the other was dismissed because of aid given the police by the defendant. Chief Metzger adopted his present policy after several other plans had been unsuccessful. For some time officers with tape lines and stop watches were tried, but the majority of the cases were lost as the defendants would raise the question of the officer's ability to catch the registration numbers and speed accurately at the same time. Frequently the officers were unable to identify the drivers of the cars.

So far Chief Metzger's orders to shoot holes in tires has not been found necessary, although the chief says he will see that it is done in one or two cases if drivers refuse to stop. "We shoot prisoners in the legs when they try to escape," he said, "Why shouldn't we shoot holes in his tires?" The speed permitted on local streets is 15 miles an hour in residence districts and 8 miles an hour on business streets. Chief Metzger has stated that he intends to enforce the law regarding motor speed to the letter.

DE CATERS WINS A RACE

Brussels, July 27—The ill success of the Belgian Ardennes was apparent yesterday when only six racers turned out to dispute the event run under grand prix rules. The race developed from the start into a chase between Baron de Caters and Jenatzy in the Mercedes and Lee Guinness in a Darraq. De Caters had the pull in the sixth lap, for Guinness burst a tire. Nevertheless he finished only a minute ahead of the Britisher, in the excellent time of 6 hours 29 minutes 10 seconds. The Liederkerke cup race was run the same day. Porlier, driving a Minerva, won in 6 hours 40 minutes 11 seconds for the 514 kilometers.

PRINCE REACHES PARIS

New York, Aug. 10—A cable from Paris says Prince Scipione Borghese, of Italy, reached that city at 3:30 p. m. today from Pekin, which city he left in the race for the French capital June 10. He was cheered by thousands as he passed along the boulevards in his travel-stained Fiat. He is the first one to finish.

RECEIVER FOR POPE CO.

Big Eastern Motor Car Maker in Temporary Financial Trouble —A. L. Pope in Charge

New York, Aug. 14—Special telegram—The Pope Mfg. Co. has gone into the hands of a receiver. An Associated Press dispatch from Hartford states that Judge Base, of the superior court, appointed Albert L. Pope receiver. The application for the receivership was made by the McManus-Miller-Kelly Co., an advertising agency in Toledo. The receiver was placed under \$200,000 bonds and authorized to conduct the business. William A. Read, chairman of the executive committee, who has an office in this city, refused the Motor Age correspondent any information as to the cause of the failure or the amount of the liabilities.

The company was incorporated in February, 1903, in New Jersey, succeeding the American Bicycle Co. in the manufacture of bicycles and motor cars. It owns all the stock of the Pope Motor Car Co. and other Pope plants. There is \$10,000,000 of common stock, \$2,390,976 of first preferred and \$8,633,100 of second preferred stock outstanding or something over \$21,000,000 in stock. General receivers for the Pope company were appointed in New Jersey yesterday.

The Pope company has manufacturing plants in Hartford and Enfield and Westfield, Mass., Indianapolis, Ind., and Hagerstown, Md. In the complaint the value of the company's property in Hartford is given at \$3,291,398. It is asserted in the complaint that in the hands of competent receivers the affairs of the company can be so administered that the claims against it can be paid in full. The McManus-Kelly company claims damages of \$85,000 in addition to a claim of \$4,436, on which it asked for a receiver.

The appointment of a receiver for the company was due to the present condition of the money market, according to a statement given out in New York late today by Joline, Larkin & Rathbone, counsel for the receiver. The statement follows:

"The necessity for the present proceeding in the case of the Pope company and its subsidiary company arises from the curtailment of credit and reduction of loans. In a word, the receivership proceedings are the direct outcome of the present rigid money conditions. Loans are falling due and the company was unable to raise funds with which to meet them."

Last year the company reported \$229,000 after all charges, the year before \$87,000 and 2 years ago \$51,000. The total market value of its stocks is only \$2,300,000. Last year its annual report showed a deficit to the balance sheet of \$403,000. It had a surplus of \$4,000,000 over current liabilities, which was a loss of \$600,000 compared with the balance sheet of the

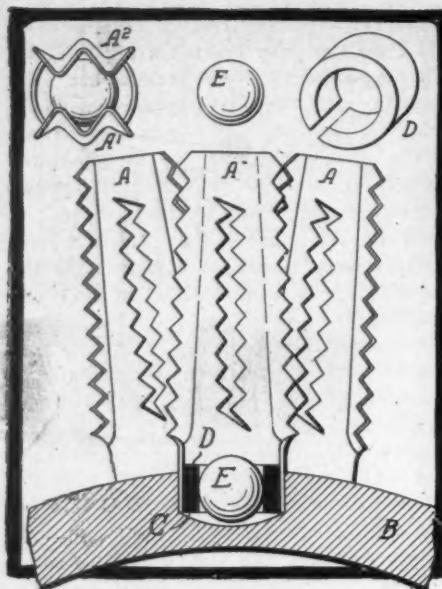
previous year. The trouble that came to the Pope Company created a big stir, not alone among motor car dealers, but even in financial circles, and rumors were flying thick and fast. Nobody here believes there is the least doubt that the company will be able to extricate itself from its present difficulties and satisfy all its creditors. It must be remembered that the big Pope strike proved somewhat disastrous to the Pope interests and that, while the company turned out a large number of machines from its Toledo plant the output was so slow in getting on the market that considerable good business was lost entirely. It is believed in trade circles that there will be a complete reorganization.

BEACH SHOW A GOOD ONE

Atlantic City, N. J., Aug. 10—The 3-days' show which wound up the motor carnival week closed last night and was a success, although the exhibitors were hit a hard blow today when the city secured an injunction prohibiting the sale of motor cars or machinery on the pier. The case will be heard September 3—to late, of course, to do the dealers any good. The show itself consisted of displays mostly made by the Philadelphia dealers and 1908 models were shown on several of the stands. Among those occupying space were the Hamilton Auto Co., with the Stoddard-Dayton; the Ford Motor Co., the Winton company, the Motor Shop of Philadelphia, with the Oldsmobile and Stearns; the Autocar Co., the West-Stillman Motor Car Co., with the Pennsylvania and Mercedes; the Scull-Morris Motor Co., with the Acme; the Keystone Motor Co., with the Packard and Buick; Titman & Leeds, Matheson and Studebaker, and the Kelsey Motor Car Co., Maxwell. The accessory exhibitors included Healey Leather Tire Co., of New York, tires; Charles F. Kellom & Co., Invader oil; Auto Light and Motor Supply Co., supplies; Continental Tire Co., tires; American Chauffeurs' Co., New York; Atlantic Auto and Machine Co. Works, oils; General Auto Supply Co., supplies. The Stearns people have carried their contention on the disqualification of A. W. Church's car which was barred from the races by the judges on account of certain technicalities on the equipment, to the American Automobile Association.

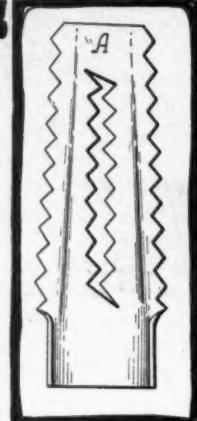
PRICE NEARING HOME

Chicago, Aug. 14—Word was received today that Charles W. Price, driving the sealed bonnet Maxwell, had arrived in South Bend this morning and would be at Valparaiso tonight. A delegation of 100 Maxwell owners will meet Price at Hobart tomorrow, where the celebration will be in the form of a speech of welcome, a dinner and a ball game, the festivities being arranged by the Maxwell-Briscoe-Chase Co. Price has traveled about 4,500 miles to date without breaking the Chicago Motor Club seals, according to his statement.



MOTOR CAR DEVELOPMENT

Payne-Modern Cars Four and Six Cylinders— Air Cooling—Novel Selective Transmission

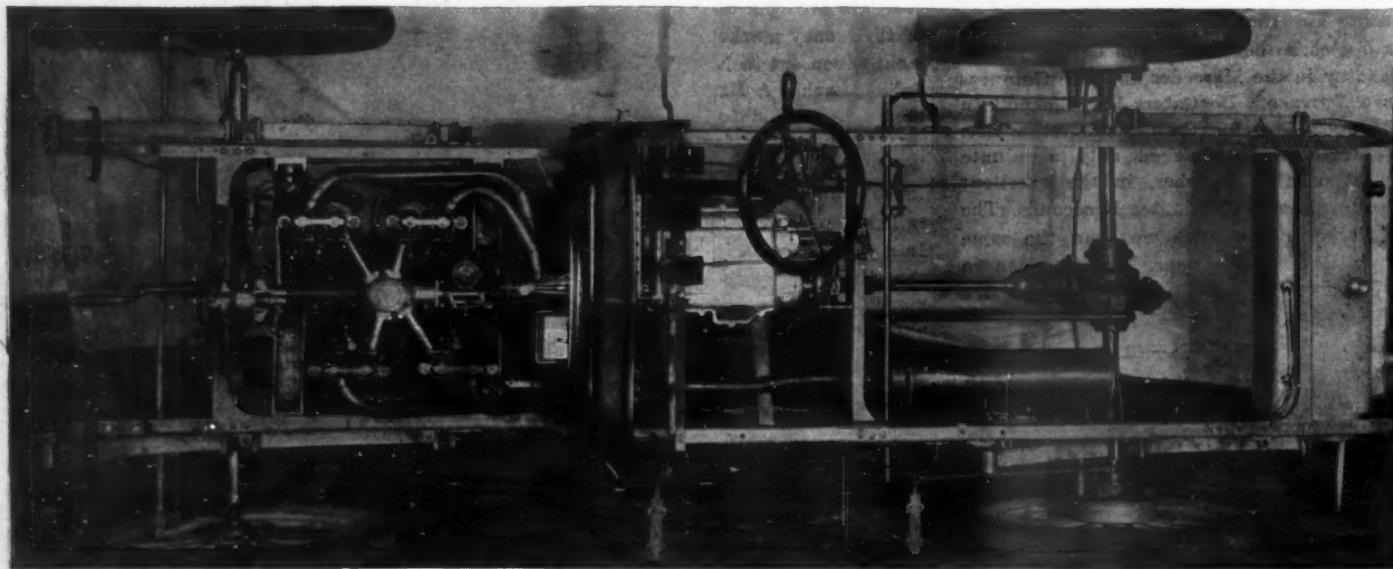


MONG the early announcements of 1908 motor cars are three models built by the Modern Tool Co., Erie, Pa., all of which are new from hood to tonneau and which show many departures in design. The three models are a 24-horsepower four-cylinder touring car; a 35-horsepower six-cylinder touring car, and a 35-horsepower six-cylinder runabout. All are made with a .4 by 4½-inch cylinders. Featured in all three models is the air-cooled motor with the cylinders mounted in V fashion—Marmon design—with a separating angle of 60 degrees. In feeding the cylinders with mixture the carburetor supplies a large central distributing chamber carried in the V space above the crankcase and provided with radiating pipes, one for each cylinder, so the four or six cylinders not only inspire an equal amount of vapor but further secure, the maker claims, the same quality of mixture. The clutch is an expanding member. The transmission, based on the selective principle, offers four forward speeds and differs from standard

sets in that the gears always are in mesh. The countershaft, as well as all of the gears in the set, however, are idle on the high or direct speed. The car is without side levers, the gear shifting lever being on the steering column, Pierce fashion. The regular and emergency brakes, as well as the clutch, are under pedal control. Instead of mounting the front and rear semi-elliptic springs horizontally on the axle they are placed in an inclined position with the front ends much higher than the rear for reasons stated later. The cars are provided with the general braking, electrical, lubricating and other equipment and have conventional bodies.

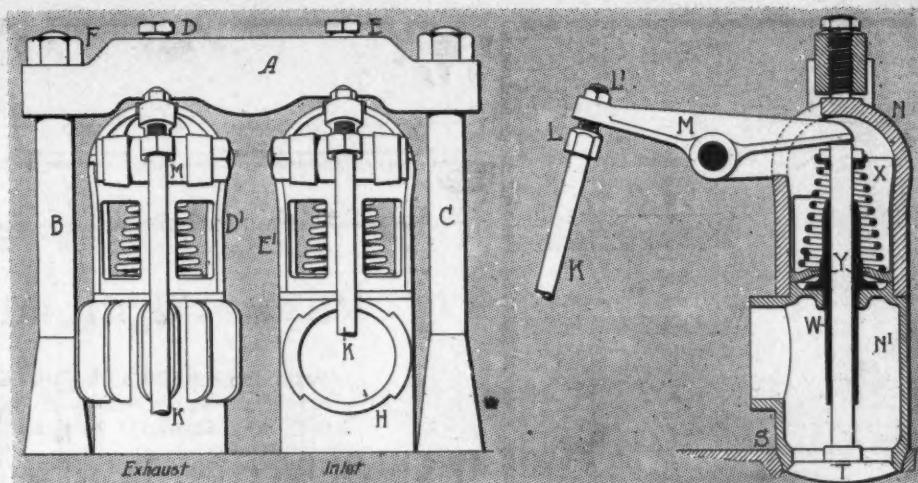
In design, as well as the working out of its many details, the Payne-Modern four and six-cylinder motors are alike, the bore and stroke of the cylinders in each being the same, the mounting of the cylinders at 60 degrees being alike, and a central distributing chamber furnishing mixture to the cylinders having a place on each. The same system of air-cooling in use on both. In cooling the cylinders the company de-

pends on heat radiation through copper fins which are ingeniously secured to holes in the cylinder walls. Each fin A is made in halves and of the size shown in the illustration. In the same illustration A1 and A2 show the relative position of the halves of the cooling fin as well as the corrugations in each half. In attaching the fins the cylinder wall B is recessed as shown at C; the halves of the fin are inserted; a split collar D is placed within them and a steel ball E driven home within the collar, which serves to swage the copper fin into the iron of the cylinder wall, thereby retaining it rigidly in position. By arranging the cylinders at an angle of 60 degrees the company claims economy of space which is borne out by the fact that the crankcase of the six-cylinder engine is but 36 inches over all, yet all the bearings are of ample length. This arrangement of cylinders in an air-cooled car permits of a greater surface exposed to the circulating air and also leaves plenty of room between the cylinders for the camshaft and valve arrangements. As



TOP VIEW OF CHASSIS OF FOUR-CYLINDER PAYNE-MODERN TOURING CAR

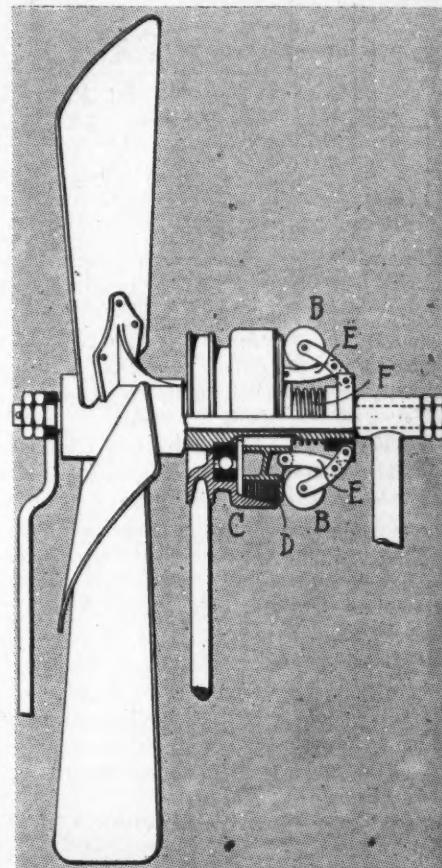
in all other motors designed along this line, the cylinders are bolted direct to the crankcase, the camshaft is housed in the angle in the top of the case and valves are opened by lifter rods on the opposing sides of the cylinders, these lifter rods acting on the valves through rocker arms. The valve arrangement is such that in the four-cylinder car the intakes are on the rear of the front cylinder pair and on the front on the rear cylinder pair, a fact which simplifies the intake piping from the central distributing chamber. In the six-cylinder car this arrangement is also followed, but for the central pair the intake valve is on the rear of the right cylinder and on the front of the left cylinder. This arrangement is imperative in order that the two front cylinders on the left and the right front cylinder can draw direct from the forward end of the distributing chamber whereas the two rear cylinders on the right and the left rear cylinder take their supply from the rear end of this distributing chamber. The carburetor in both models is carried between the back pair of cylinders and centrally located above the crankshaft, delivering the mixture to the distributing chamber through a large-diameter pipe leading into the bottom center of the distributing chamber. The valves are placed in upright position on the top of the cylinder heads, the company claiming that cooling is facilitated by placing them this way instead of setting them in the heads, in that when the valves lift to discharge the hot gases these gases are at once on the outside of the cylinder and do not heat the cylinder walls by passing up through the head or through any of the passages in the head. To facilitate rapid exhaust each exhaust valve is provided with its own muffler pipe with an inside diameter of $1\frac{1}{4}$ inch, these pipes on the right and left cylinders eventually uniting before reaching the muffler. Intake and exhaust valves for each cylinder are held in place by a yoke A, carried on studs B and C on the cylinder heads. In the top of the yoke are pressure screws D and E bearing respectively on the valve cages D1 and E1 holding them in position on the cylinder heads. In removing a valve it is first necessary to loosen the pressure screws, then slacken the nut F, swing the bridge or yoke out of position and lift the valve cage off. The intake and exhaust pipes in these motors are attached to the valve cages by means of a breech lock thread H, it being only necessary to turn the lock nut one-quarter of a turn in releasing or attaching a pipe. The general arrangement of the valve cage is further shown by a vertical section in which K marks the lifter rod from the camshaft, the upper end of which works in the hollowed end of the stud L located in the end of the rocker arm M. The timing of the valves can be varied at will in that the stud L threads into the end of the rocker arm M and is anchored in any position by the lock nut L1. The opposite



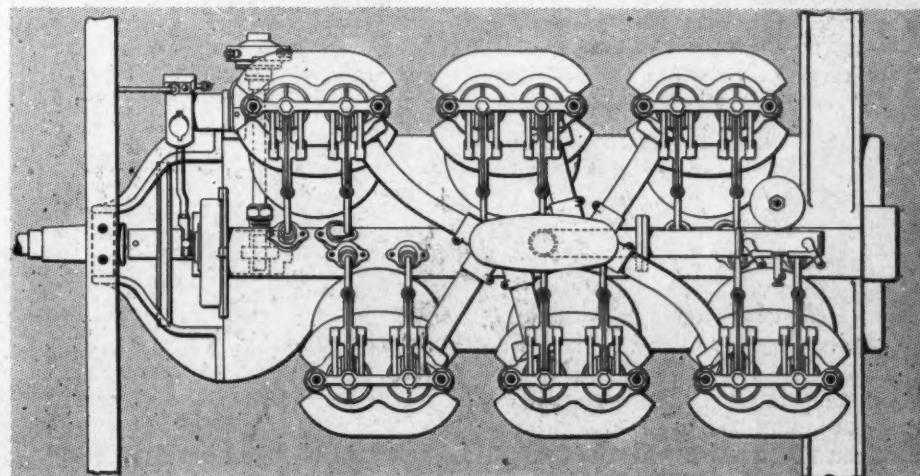
VALVE ACTUATION IN PAYNE-MODERN FOUR AND SIX-CYLINDER CARS

end of the rocker arm works through an opening in the valve cover N, this cover resting on the valve cage proper N1 which rests in the cylinder S. The valve T is made with a beveled seating and its stem operates in a long guide W which threads into the top of the valve cage. Instead of seating the valve spring X direct on the valve cage, the separate valve seating Y is positioned, the value of it being that the temperature of the valve spring is greatly reduced. This method of keeping the valve spring well away from the hot valve cage has been used by other air-cooled car builders.

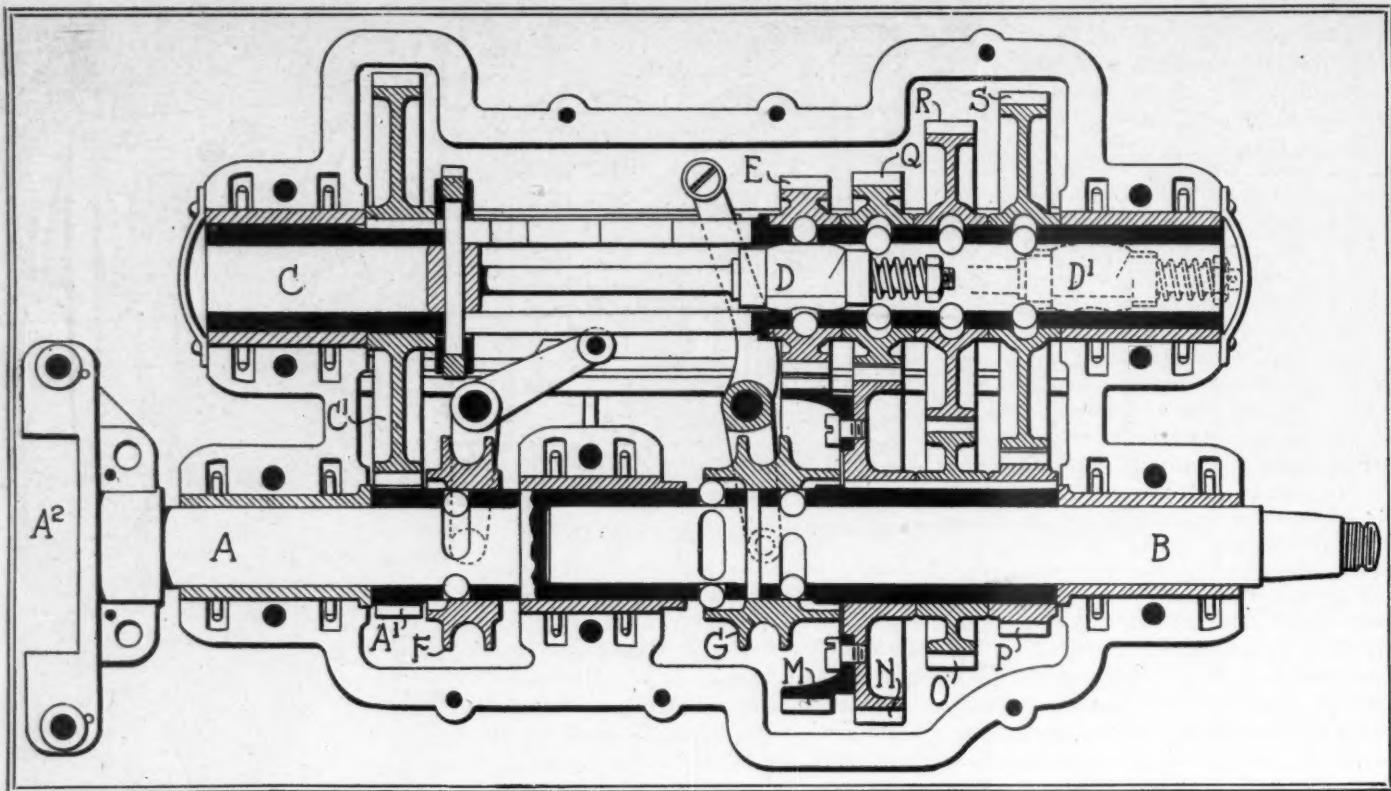
Air is circulated about the cylinders by means of two fans, one carried on the outside of the flywheel and designated A in the vertical side section of the six-cylinder motor. This fan has twenty blades. The other fan, a five-blade one, is located at the front of the engine and driven by belt direct from the crankshaft. This fan is controlled by a pair of governor weights B, which serve to keep it at a maximum speed at all times. This fact is advantageous when the engine is running when the car is standing still, when the car is doing heavy hill-climbing service or when driven on direct speed, but a low speed maintained on account of the roads. The action of the governor consists in the operation of the clutch with the male part D operated from



GOVERNOR ON FAN ON PAYNE-MODERN CAR



CARBURETOR ARRANGEMENTS ON PAYNE-MODERN CARS



SELECTIVE GEARSET ON PAYNE-MODERN CARS, WHICH WORKS ON THE INDIVIDUAL CLUTCH SYSTEM

the governor weights B through crescent-shaped arms E. The male part D acts against the corresponding clutch member C. On slow motor speeds the spring F tends to rigidly lock the clutch members C and D together, but with faster speeds the governor weights B due to centrifugal force are thrown outward, at the same time tending to disengage the parts C and D as well as compressing the spring F. This fan is carried on ball bearings of the annular type. The maker, because of the double fan scheme, the abnormally large-diameter valves, the large exhaust pipes, the placing the valves on top of the cylinders, as well as mounting the cylinders to 60 degrees, claims to cool his cylinders properly and also to use a compression of 80 pounds.

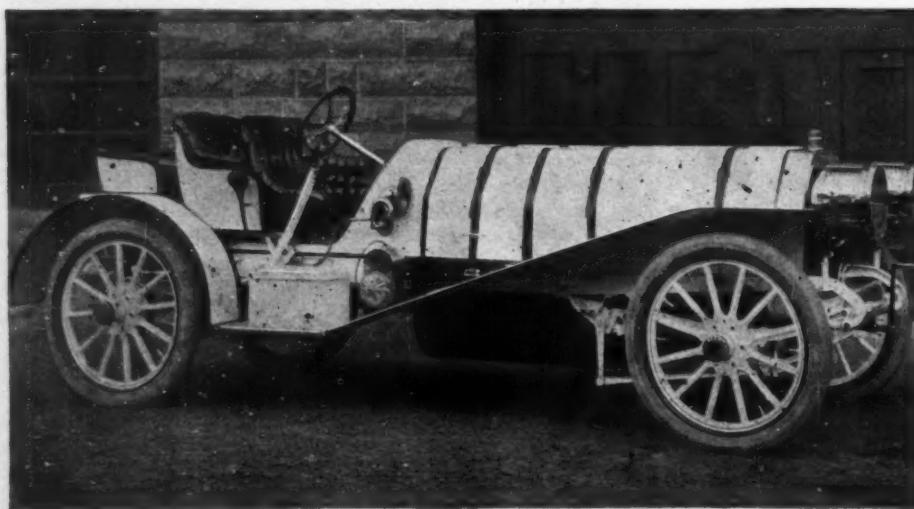
The high-tension ignition system used

takes its current from storage cells carried on the running board in a box compartment, used as a step to the tonneau entrance. The plugs are carried on the inner side of the cylinder heads between the intake and exhaust valves. The commutator is accessibly located on the outer end of a horizontal shaft at the right front. The cylinders in both sections of the crankshaft are lubricated by a six-feed McCord oiler carried on the right half of the dash and driven from the rear end of the camshaft by a belt. On the oiler are the usual sight feeds which tell the quantity of oil delivered to the crankshaft, crankcase and the cylinders. Located in a large rectangular-shaped oblong tank beneath the rear of the chassis is the gasoline supply from which the gasoline is forced to an auxiliary

tank on the dash whence it feeds by gravity to the carburetor. The pressure required to force the gasoline from the main to the auxiliary tank is generated by a small automatic air pump driven from the camshaft. The pressure is regulated by a relief valve carried on the dash, the useful pressure being indicated by a gauge placed just beyond the relief valve.

Foremost in the Payne-Modern system of transmission is an expanding clutch faced with a special fiber and located within a circular flange on the rear of the flywheel. Expansion is by a cam movement controlled by pedal. Using an expanding type of clutch makes it possible to have the entire mechanism self-contained and operate in a dustproof case. The clutch is operated by the center pedal and is interconnected with the emergency brakes so their application disengages it.

The undoubtedly novelty of the car is the selective transmission. It has four forward speeds, a single reverse and all gears are constantly in mesh. There is no sliding of gears, but the speed variations are effected by a unique scheme of locking certain gears to their shafts. Gears and shafts are made of chrome nickel steel hardened and ground. All operating parts pertaining to the gearset are made of Tungsten steel hardened and ground, and the bearings are of phosphor bronze lubricated by ring oilers. In this gearset the part A of the mainshaft has connection through its ending A2 with the clutch and the part B connects through universal joints with the driveshaft to the rear axle so on direct drive the transmission of power is effected by locking the abutting



SEVENTY-FIVE HORSEPOWER GEARLESS SIX ROADSTER

ends of these shafts at which time the countershaft C and every gear in the transmission set remain idle. To engage either the reverse or three lowered forward speeds the timing knuckle D which operates in the hollow countershaft C is passed under the gear required. For example, with gear E in the illustration it serves to force up two balls engaging the gear E with the countershaft C. At the same time the front cam ring F passes forward on the mainshaft A engaging the gear A₁ which drives the countershaft of the set through the gear C₁. At the same time the back cam ring G moves backward engaging a cone of gears M, N, O, P, driving on the shaft B. Thus the power comes from the motor to the shaft A, is transferred through gears A₁ and C₁ to the countershaft C, thence through the gears E, an idler and M to the mainshaft B, thence to the back axle. This is reverse speed. For the three forward speeds gears Q, R and S are respectively locked to the countershaft C and the transference of power is respectively to the countershaft B to the corresponding gears N, O, P. To obtain the direct drive the timing knuckle D is passed beyond the gears E, Q, R, S until it gets a position D₁ and, at the same time, the front cam ring F unlocks the gear A₁, while the back cam ring G moves forward, accomplishing the locking of the shafts A and B together.

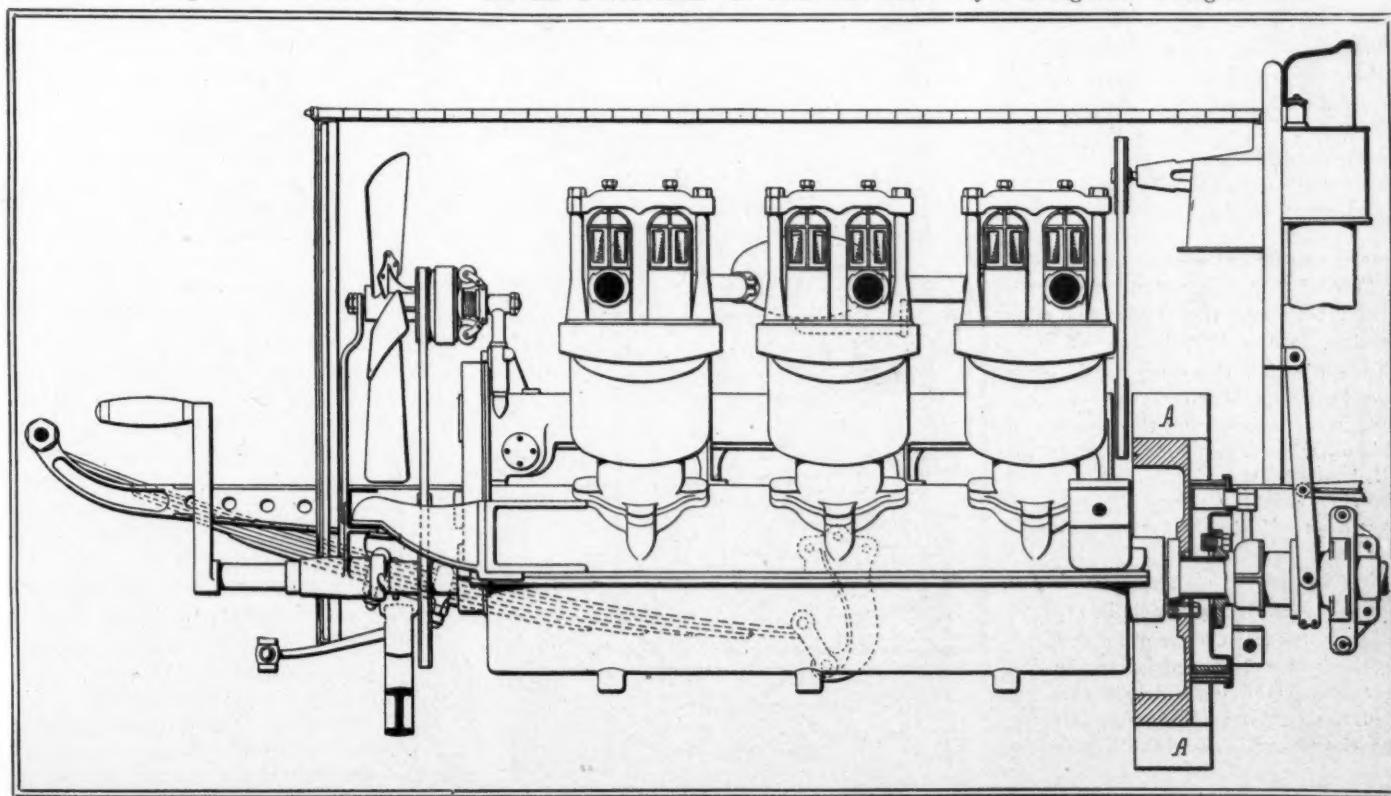
In the spring suspension, contrary to general practice, it will be observed, from the top view of the chassis, the front semi-elliptics are carried outside of the side pieces of the frame and that in keeping with general practice the rear semi-elliptics also are placed outside of these frame members. The peculiar location of the



FOUR-CYLINDER PAYNE-MODERN CAR

front springs is shown in the side elevation of the six-cylinder motor where the spring hanger on the end of the frame piece curves upward instead of downward, thereby throwing the front end of the spring higher than the level of the frame. The rear end of the spring is placed considerably lower, however, than the frame level and the spring near its center is strapped to an inclined seating carried on the I-beam axle. In the side view of the car can be noted the similar mounting of the semi-elliptic rear springs, to accomplish which the spring hangers are given a half S shape. The reason for this, as claimed by the maker, is that when the springs are placed at such an angle they meet the obstructions on the road at the angle they are presented, the maker asserting that the car driven from the rear axle acts

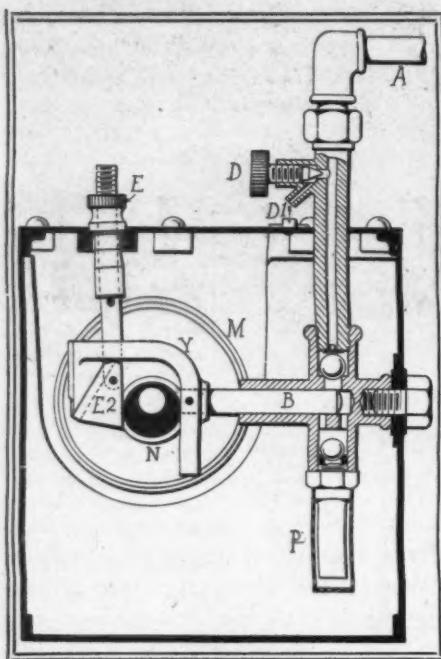
with this spring suspension much like a motor boat which drives up out of the water. In the case of the car the power tends to drive the car up out of the sand. Three brakes are provided—a running brake on the driveshaft in rear of the transmission and emergencies on the rear hubs. The right pedal controls the running brakes, the left the emergencies. In the four-cylinder car the front axle is of tubular construction. Outside of the three pedals the control of the car rests with the steering column above the hand wheel on which are spark and throttle controls. Beneath the wheel is a horizontal lever for speed variations. From the body viewpoint the Payne-Modern car, as might be expected, presents no original lines. Its bonnet is of the circular cylinder-shaped style throughout its length.



IN PAYNE-MODERN CARS FRONT AND REAR SEMI-ELLIPTIC SPRINGS ARE TILTED



DEVELOPMENT BRIEFS



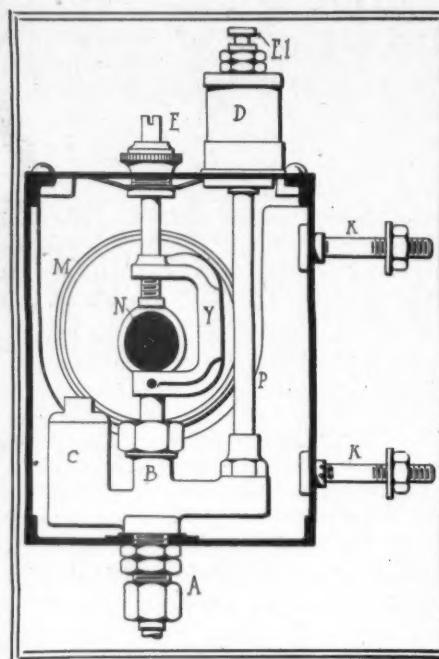
MCCORD STYLE D OILER

During the present season and for the approaching year McCord force feed lubricators, manufactured by McCord & Co., Chicago, Ill., and primarily intended for motor car use, are made in six styles or models. Each model is made with from one to ten feeds inclusive and suitable for carrying on the dash or on the motor bed underneath the hood. McCord oilers are of the multi-pump variety—a pump for each sight feed. A ten-feed oiler has ten pumps within it—a two-feed lubricator contains a couple of pumps. All six models or styles are free from springs in connection with their valve operation, gravity ball check valves in use in most of the styles and drive for the majority of them is by rotary or ratchet means.

Foremost in the six styles is model M, illustrated by an end section, in which A is the lead through which the oil passes to the bearing, B and C the two pumps for maintaining the flow—this oiler has two pumps for each oil lead—D the sight feed for showing that the pump is working, E an adjustment for varying the quantity of oil pumped, F the filling cap of the oil reservoir, G the worm shaft on which is the drive pulley H. On the other end is the worm L for driving the worm wheel M, on which is carried the eccentric N for operating the pumps. The yoke Y, the jaws of which span the eccentric N, connects at its upper

McCord Lubricators

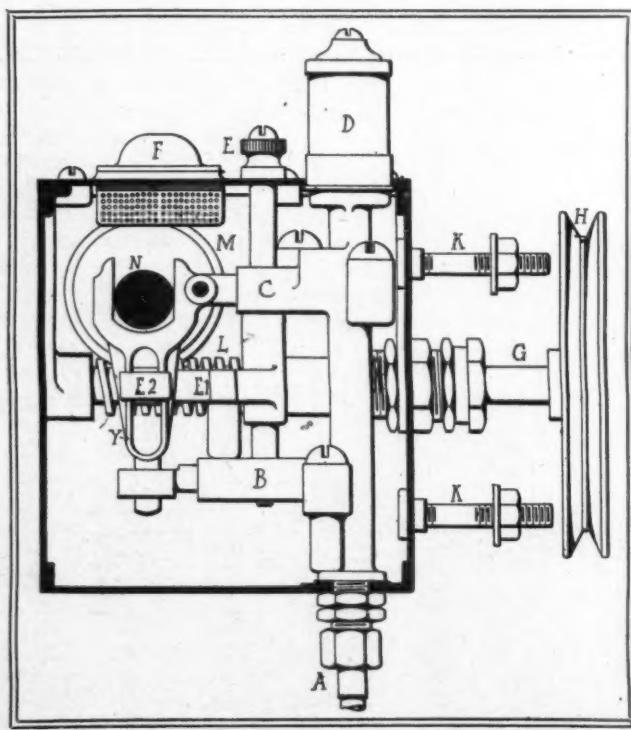
end with the plunger in the pump C and at its lower end with the plunger of pump B. It is through this yoke and the adjusting nut E that it is possible to vary the length of the piston plunger stroke in pump B, whereas the stroke of pump C is not altered. On the out stroke of pump B oil is sucked out of the reservoir, filling the pump barrel, and on the in stroke this oil is sent into the feed sight feed cup D on the lubricator top. The out stroke of pump C sucks oil out of the sight feed glass D and the in stroke delivers it to the bearing through the pipe A. In varying the length of the stroke in pump B, turning the adjusting nut down will lower the arm E1, as well as lowering the piece E2, forming a fulcrum for the yoke Y. The nearer E2 is to the bottom of the slot in the yoke the shorter will be the stroke. Raising E2 will proportionately lengthen the stroke. In this pump as in all of the other styles, except F and K, the pump castings are made of red brass and are so designed that the pump for any one of the leads can be taken out without disturbing the others. In styles F and K the major portion of the pump castings is cast integral with the oiler reservoir. Style M is made with a polished sheet brass reservoir and although illustrated with a rear drive can be had with end drive. The pump plungers are



MCCORD STYLE J OILER

hardened steel, the worm gear is brass, plungers are a ground fit in their barrels and all working parts are carefully made. Bolts KK are for attaching the oiler to the car dash.

The style J oiler, also illustrated with an end section, is different in many details from style M. By way of explanation: Oil is delivered from the pump barrel B through the exit pipe A, the plunger for which is reciprocated by the eccentric N driven by a worm gear M. The yoke N spanning the eccentric allows of adjusting the pump stroke through the finger nut E on the top of the oiler reservoir. Screwing this down increases the oil flow and screwing it up lessens the flow. In the chamber C is air under a 10-pound pressure and pipe P connects with the sight glass D on top of the reservoir. This is not a sight feed glass, but serves the same purpose. To discover if the pump is working the button E1 is pressed, which, as it were, short circuits the oil flow in that the oil then rises in the pipe P, passes through the cup D, thence to the reservoir. In the style D the plunger B attaches to a yoke Y which spans the eccentric N. A bleeder test is connected to a pipe A in the form of a crew D, which when turned out opens a passage D1, liberating the oil—showing that it is flowing. The freed oil drops through an opening into the reservoir.



MCCORD MODEL M MECHANICAL OILER

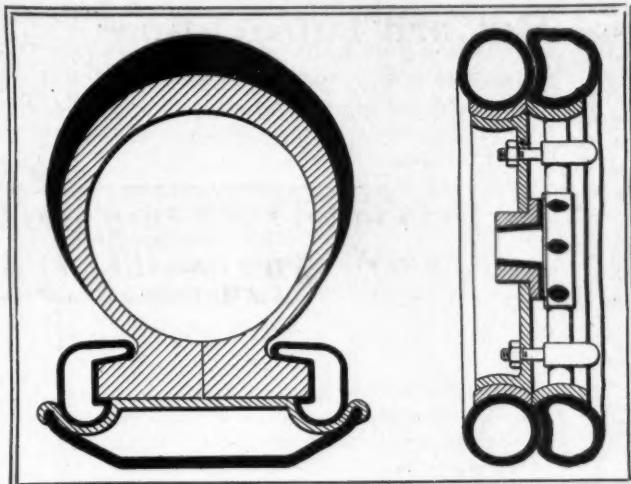
CURRENT MOTOR CAR PATENTS



Supplemental Car Wheel—No. 861,618, dated July 30; to M. D. Stocking, Lindenwood, Ill.—The inventor's supplemental wheel for motor cars, intended to be carried on the side or rear of the car and fitted with an inflated pneumatic tire, is so designed that by tightening four bolts it can be placed on the outside of a regular wheel and used in place of it when the regular wheel's tire becomes punctured or otherwise impaired. The idea of the wheel is that it can be used at times when the driver of the car cannot afford to put on a new tire but attaches the wheel temporarily. The wheel is of the disk variety and has a large central opening for fitting over the hub of the car wheel so the weight is borne directly from the hub. It is held in place by four bolts or studs passing through the spokes or rim of the regular wheel and through the disk portion of the supplemental wheel.

Tire Clincher and Rim—No. 862,405, dated August 6; to G. Lanoir, Washington, D. C.—Included in this patent is a combination rim consisting of a lower portion with a flat central base and ends inclined upward at 45 degrees; together with a top or upper portion comprised of a central horizontal portion uniting with downwardly-arched semi-circular end pieces provided with lips which fit over the inclined ends of the lower portion of the base. The tire casing is intended to rest on the horizontal part of the upper portion of the rim. To hold the tire lips in position a pair of continuous side rings with turnbuckles is used, these rings being adapted to fit into the semi-circular recess in the upper part of the wheel rim as well as fitting tightly over the lip of the tire.

Cushion Tire—No. 862,785, dated August 6; to W. E. Andrew, Atlantic Highlands, N. J.—In this cushion tire is a conventional-shaped outer casing with base flanges which rest on the wheel rim and



LANOIR'S CLINCHER RIM

STOCKING'S CAR WHEEL

are secured thereto by iron ring plates resting on top of the flanges and held to the wheel rim by cross bolts and side clips. The tire casing is filled with two rubber pieces, one a semi-circular tube filling the tread portion of the tire and the other a T piece filling the remainder of the tire and extending between the inner edges of the flanges to the wheel rim. The semi-circular filling piece contains three semi-circular air passages and a fourth air passage, shaped like the letter D, which is laid on its side with the curved surface corresponding with the curvature of the tire tread. These air spaces are filled with air at normal pressure.

Combination Spring Supports—No. 862,682, dated August 6; to J. J. Vanden Bergh, The Hague, Netherlands—Where a semi-elliptic spring is used for supporting the car frame on the axle a combination of rubber buffers working in conjunction with short horizontal levers is used to support the spring. Pivoted to each side of the axle is one end of the horizontal levers, the other ends having a linkage with the car frame. At the fulcrum of the levers a buffer of three rubber blocks or disks separate the lever from the frame and through these blocks passes the bolt which forms the fulcrum for the lever. Where

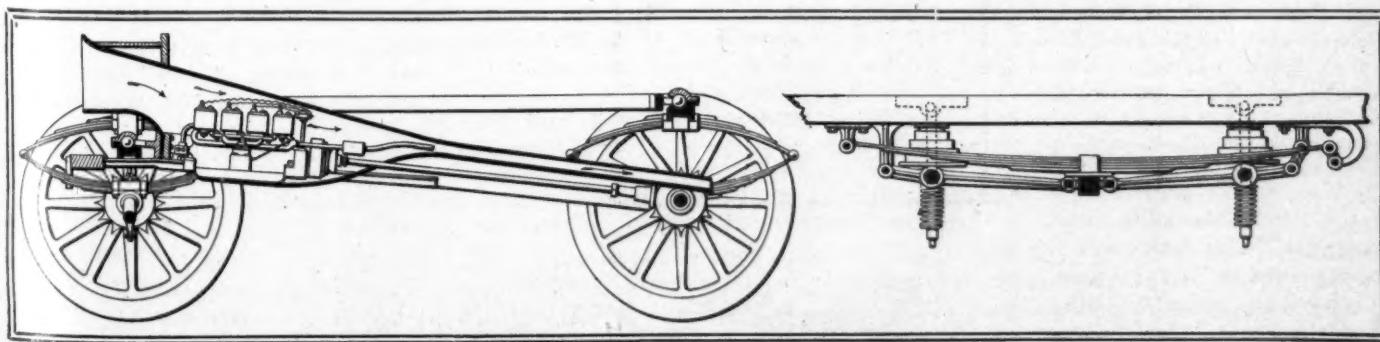
the bolt extends beyond the lever it carries a coil spring around it, which in reality assists the rubber blocks in their work. Should the spring deflect too greatly at the ends it is stiffened by the coil springs and should there be too great a rebound it is cushioned upon rubber buffers.

Air-Circulating System—No. 862,250, dated August 6; to R. Herman, Crafton, Pa.—In a motor car with a multi-cylinder engine mounted longitudinally in front of the inventor aims at maintaining a strong air current around the cylinders by enclosing the entire motor in a hood device of conical shape with a large open end to the

front for the free entrance of air and a taper rear end immediately back of the cylinders from which a uniform diameter pipe leads to the rear of the car. In order to still further increase the air the exhaust pipe from the motor enters the restricted portion of the hood.

Dual Brake Application—No. 861,298, dated July 30; to T. J. Lindsay, Indianapolis, Ind.—Carried on the rear wheels are internal and external brakes, both sets operated from a single side lever. The double operation is accomplished by chain connections, so that one set of brakes is brought into action on the first movement of the lever, while the other set is held out of action because of an elastic connection in its chain connection with the lever. After the first set is applied a still further movement of the operating lever overcomes the elastic connection and applies the second set.

Extra Tire Supporter—No. 860,891, dated July 23; to W. A. Allen, New York city—Incorporated in this invention is a double U bracket resting on the running board of the car, with the open part of the U's upwards. A retaining strap is hinged to the outer arm of one U and is adapted to enter the mechanism of a Yale lock on the outer arm of the other.



HERMAN'S EXHAUST SYSTEM OF AIR CIRCULATION FOR MOTORS

VANDEN BERGH'S COMBINATION SEMI-ELLIPTIC SPRING AND BUFFERS

THE READERS' CLEARING HOUSE

A. L. A. M. POWER RATING

Chicago—Editor Motor Age—Will you please give me through the Readers' Clearing House of Motor Age the formula for figuring the horsepower of gasoline motors? How do you arrive at the pressure of gasoline? I have a two-cylinder opposed motor with 5½-inch bore and 5¼-inch stroke—what power does this develop?—M. J. Williams.

There are many ways to figure horsepower, but the engineers of the Association of Licensed Automobile Manufacturers, at their meeting in May, decided upon a formula which seems reasonable and which works out well. This is as follows:

$$\frac{D^2 \times N}{2.5}$$

Here D is the diameter of the cylinder, is squared, multiplied by the number of cylinders and divided by a constant of 2.5. The constant was determined from an average computed from the known horsepower of many four-cylinder motors made in America. According to this formula a two-cylinder motor with 5½-inch bore would rate at 24.2 horsepower. What does Mr. Williams mean by "arriving at the pressure of gasoline"?

QUESTION OF ENGLISH

Davenport, Ia.—Editor Motor Age—I thought I would call your attention to a digest of the new Illinois motor vehicle law appearing in your publication four or five numbers back. By misstatement I was put to the expense of having numbers made for the front and rear of my machine and on the lamps, as were perhaps hundreds of other non-residents of the state of Illinois who depended on Motor Age for their information. The article said non-residents need not register in Illinois providing they "display their numbers the Illinois way." I take it to mean size, color of background, in front and rear and on the lamps, but a more careful investigation showed me that this was all unnecessary. I have at hand a letter from Secretary of State James A. Rose, in which he writes: "If you carry the proper numbers and lights on your machine in compliance with the Iowa motor vehicle law it will be considered a substantial compliance with the Illinois motor vehicle law, when touring in this state." As Davenport is right opposite Rock Island we motor in Illinois as much as in Iowa and many bordering cities are so situated. If you can correct the impression in your valuable journal it might do a vast amount of good. The secretary is also distributing a small vest-pocket pamphlet with the Illinois law in full, which I think may be had for the asking.—F. A. Free.

It is impossible to see where Motor Age has misled its readers, even according to Mr. Free's own statement. Motor Age did not say a non-resident was compelled to have numbers of the same description as those used by residents of Illinois; it did say "providing they display their numbers the Illinois way." Nothing was said about kind or number—reference was made to the manner of displaying the numbers. If a grammar school student cannot correctly interpret this, perhaps a district school marm might do so.

LOUGHEED MAKES ANSWER

San Francisco, Cal.—Editor Motor Age—I have read with much interest the several expressions of opinion elicited by the publication of the first article of my series on "Some Trends of Modern Automobile Design," and I am pleased to make such comment as seems called for. Concerning the letter from A. E. Osborn, given space in your issue of June 27, I must commence with a protest that I have not yet committed myself to a support of all parts of the general proposition with which he takes issue. At the time this is written there has been nothing published from my pen in which it can be made to appear that I am at all too certain of the elimination of the change-speed gear, and I certainly am prepared to admit that its elimination may prove impossible and, in the lack of anything better, even undesirable. Indeed, about all I have said on the subject so far is implied in the title announced for the fifth article—"The Car of the Future—Gearless and Clutchless!"—and in which the use of the question mark will please be noted. At the same time I am strong in the belief that some of Mr. Osborn's facts and deductions will stand refuted when the fifth article appears. Without anticipating too much of what I shall have to say later, I would like to point out that although the present White cars have change gears, the earlier ones, which also were excellent machines, had not, while the Stanley and the Serpollet steamers, the good qualities of which few will have the hardihood to dispute, never have had change gears. As for the steam and electric trucks Mr. Osborn cites, it might better have been said, "the severe conditions under which such motor cars are often used," for the point involved here is the one of moving exceedingly ponderous vehicles and heavy loads with engines that may be only a small percentage of the vehicle weight, thus

making the change-speed gear peculiarly necessary. In this connection it is worthy of note that even the heaviest trucks and omnibuses rarely have motors as powerful as are now common on the higher-powered pleasure cars—proving conclusively that even now the principle of overpowering is common practice for avoiding use of the change-speed gear, even though without avoiding its presence. Almost every gasoline motor cycle is a familiar example of a fairly satisfactory gearless car, made so by overpowering. The same is true in a considerable degree of cars that in tests have proved capable of phenomenal runs with the highest gear sealed into engagement. And, to forestall a possible objection right here, let it be remembered that even geared cars are not unknown to stall under conditions sufficiently strenuous. This brings in another point, rarely considered in its full significance—that there is a definite limit, now nearly reached in some cars, beyond which neither gearing nor overpowering can achieve an improved result. This limit is the limit of available traction—not power—and it is a matter of only the simplest figuring to prove that the contact between the driving tires and the road under any given car can be regarded as a friction transmission, capable at any given speed of transmitting only so much power—the consequent maximum that can be utilized for propulsion, without geared treads working into a rock road, or some similar absurdity. In other words, when enough power is made available to slip the driving wheels in all ordinary conditions of road surface and with the high gear in engagement, no further advantage can be derived from the presence of the change-speed gear. This is rather significantly indicated in the six-cylinder Ford cars, which are fitted with two-speed planetary gears affording a high-speed ratio only double that employed for the low-speed. Imagine the high-speed placed out of commission on this car—certainly the result would be a gearless car of capabilities at least suggestive, and requiring only slightly greater engine flexibility and power to render it all that could be desired. As for Mr. Osborn's argument anent the reverse gear, this only goes to show how extraordinarily enslaved we have become by the idea that many of the present shortcomings of the internal-combustion engine are hopelessly irremediable. If a reverse gear "would be much more satisfactory than arranging an internal-combustion engine to reverse," even if such reversing "could be accomplished with the same certainty and ease as with a steam engine," why will not the same logic that Mr. Osborn uses in an earlier portion of his letter dictate the



application of reverse gears to "the most successful type of steam automobile," and to "steam trucks" and "electric vehicles"—to avoid the calamitous expedient of making the engine to run in either direction? Moreover, why must Mr. Osborn deem it inevitable, in a field of engineering that has seen so unparalleled a growth, that great power and flexibility must be always accompanied by "great increase in the cost, weight and size and low efficiency of working under ordinary conditions"? Having brought the motor vehicle to its present state of development, is the mechanical genius of the age going to rest on its laurels, or do its further work by the paradoxical method of seeking improvement without the elimination of defects; or will the elimination of the defects be the natural road to the improvement? Concerning Mr. Wixon's letter, also published June 27, I wish to express my hearty appreciation of his approval. In reference to his query about the chemical phenomena involved in the combustion, however, it is an established fact that the gases after combustion occupy less space at a given temperature than before, showing that the pressure during the working stroke is maintained solely by the heat present. As for the "extraordinary effect of a little burnt gases," usually there is really a great deal of burnt gases, which



have no more effect than their quantity and quality as an incombustible diluent would lead one to expect, unless through stratification the fresh charge is shielded from the action of the ignition means. To John Smith, whose letter is printed in the issue of July 25, it seems to me sufficient to suggest that the commonsense way of securing anything not regularly marketed is to have it made. Any tyro in machine work should be able to turn out a distributor to serve the same purpose as the one shown by my drawing on page 19, issue of June 27, while the design and construction of a small plunger pump should prove a no greater tax upon a modicum of engineering ingenuity and facilities. Or, as a last recourse, the very successful pumps in regular use on the Diesel, Antoinette, New York Kerosene and Mietz & Weiss engines might prove purchasable or be copied. During the last Madison Square garden show, in New York city, the writer was assured by one of the experts of the Pedersen Mfg. Co., of 644 First avenue, New York city, that his people would have no hesitation in undertaking to turn out small plunger

pumps of the rapid and accurate action required. Undoubtedly, too, other concerns engaged in the manufacture of force-pump lubricators, could guarantee satisfaction. As for no other change being necessary than the application of such pumps to present engines, this the writer doubts. For the best results, control should be by weakening the mixture, and weak mixtures ignite with some difficulty under the low compression and poor scavenging that prevail in present motor car engines.—Victor Lougheed.

WARNING FOR TOURISTS

Brownsville, Pa.—Editor Motor Age—Notify all tourists who expect to come over the national pike from Wheeling east that at Brownsville, Pa., where the road crossing of the Monongahela river is made on a toll bridge, the authorities await their arrival and if not supplied with the Pennsylvania license tags the motorists are promptly charged \$10 and an order taken for the tags at \$3, with a necessary hold-up of 3 days. Arrangements may be made to have the tags delivered at the objective point, to be ready for the return trip. As this point is 40 miles in from the state line there is no escape from the fine, so it will be less trouble and cheaper for through tourists to arrive here fully equipped with the law requirements.—Alfred C. Smith, M. D.

LEGAL LIGHTS AND SIDE LIGHTS

STILL A MOTOR CAR

The restrictions that have shut motor cars out of Bar Harbor, Me., were tested a few days ago and the motorist who tempted the law was found guilty and fined. Fordham C. Mahoney, of New York, arrived there in an Oldsmobile recently and determined to test the local regulations. So when he came to one section of road where it said motor cars were barred he hired a horse, shut off power and was towed over the stretch. When another section was reached he again shut off the motor and was pushed along by two of his passengers. His appearance in town created a lot of excitement. A summons was issued for him and the case was taken to court. Mr. Mahoney employed an attorney and the latter argued that as the motor was shut off the machine was not a motor car in the true meaning of the word, which says it is a car propelled by power. The attorney claimed it was merchandise being transported. Judge Clark, who heard the case, did not look upon it that way. The state's attorney convinced him the mere shutting off of the power did not in an instant turn the car into something else than a motor car. The owner and the driver admitted it was a motor car, the state's attorney said, and so there was

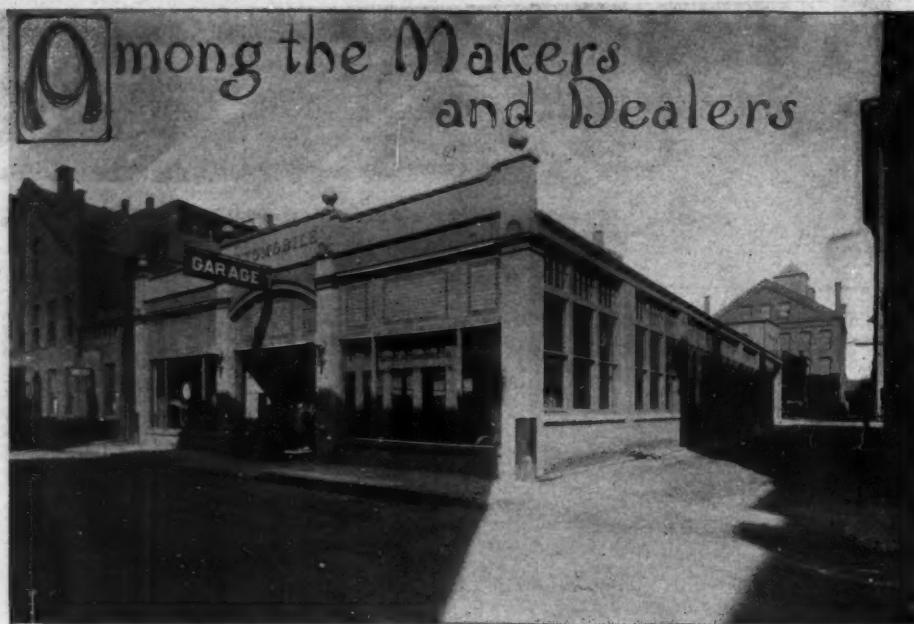
nothing else to do but find them guilty, as the legislature had given the towns power to make local ordinances excluding cars from certain sections of road. This the judge did, fining Mr. Mahoney \$1 and costs, amounting to \$17. There was no appeal taken. The matter was brought about because the residents of Bar Harbor claim the roads are too narrow for motors and horse-drawn vehicles to pass in safety around the cliffs. So to bring about the exclusion of motor cars an ordinance has been passed shutting off two sections of road over which every vehicle has to pass in order to get to Bar Harbor. Many of the summer residents own cars, but they do not take them there or try to have the ordinance repealed.

TEXAS' LIGHT LAW

Motorists who have read the new motor law in the state of Texas are puzzled over one clause, the one pertaining to lights. It reads that each car must carry lights from 1 hour after sunset to 1 hour before sunset. Strictly speaking, this means that motorists must keep their lights burning for 22 out of the 24 hours, but of course this is not what the father of the bill meant when he drew it up. What it should have read was "1 hour after sunset to 1 hour before sunrise."

NATIONAL PARK OPENED

Motorists of the northwest have gained a great concession by the action of Secretary of the Interior Garfield in changing the rule prohibiting motor cars from entering Mount Rainier national park. Regulations were issued last week by Secretary Garfield whereby motor cars will be permitted within the Mount Rainier preserve. The order is the direct result of the visit to western Washington recently made by Secretary Garfield, who in granting it responded to a very general demand. It is of somewhat general importance, as it makes a change in the management of the national parks in which motor cars have not heretofore been permitted to operate because of the dangerous character of the roads and the timidity of horses not accustomed to the machines. The new regulation is in the nature of an experiment, and is only for a year. The rules prohibit a speed exceeding 6 miles an hour, except in long, open stretches. If the experiment is a success it is considered probable that the innovation will soon extend to other national parks. As reported in the August 1 issue of Motor Age, the request of C. T. Conover, of Seattle, Wash., to take his car in the Mount Rainier preserve was the direct means of bringing this about.



HANDSOME GARAGE AT SPRINGFIELD, MASS., OPERATED BY GEISEL AUTOMOBILE CO.

Takes on the Hotchkiss—Morgan B. Kent has taken the Boston agency of the Hotchkiss car. He has opened temporary quarters at 141 Massachusetts avenue.

Miles With Mora—F. E. Miles, formerly with the Reliance Motor Car Co., of Detroit, Mich., has been appointed purchasing agent of the Mora Motor Car Co., at Newark, N. Y.

Changes Name—The Blue Ribbon Horse and Carriage Co., of Bridgeport, Conn., announces it has changed its name to the Blue Ribbon Auto and Carriage Co., having sold out the horse department, intending to handle motor cars, carriages and harness. Its garage will be located on Fairfield avenue and will be ready for occupancy about August 20.

Rush in Toledo—The usual summer half holiday on Saturday given by the Pope-Toledo factory has been postponed from week to week owing to a large volume of increased business. An arrangement has been made for the remainder of the season, whereby the office employes will divide up the work on Saturday afternoon, thus giving each employe a half day off every other Saturday instead of every afternoon of that day during the summer months as in previous years.

American Radiator Invasion—J. B. Long, president of the Long Mfg. Co., of Chicago, will sail Saturday for England for the purpose of establishing a European factory, from which the foreign demand for Long's spiral tubing radiators may be supplied. This demand has heretofore been looked after by the Long factories at Chicago and Rome, N. Y., but it has grown to such an extent during the past year that a factory abroad has become practically necessary. Several flattering offers have been made Mr. Long as to location, and it is probable a suburb of London will be decided upon as most desirable. While abroad Mr. Long will visit cities in France,

Germany, Italy and other points on the continent where motor cars are made. He will return to America in time for the New York shows in October.

Broadwell Sales Manager—E. H. Broadwell, the well-known tire man, has been appointed general sales manager of the Fisk Rubber Co., and in the future will make headquarters at Chicopee Falls.

New Geisel Garage—The Geisel Automobile Co., of Springfield, Mass., has taken possession of its new garage, which is 56 by 126 feet, built with a truss roof, so there is not a post in the garage. Windows run the entire length of the east side and go to the roof between the trusses. In the southeast corner is a 16-foot door, the front door being 14 feet wide. The garage is located in the center of the city and within a block of the railroad station.

New Stevens-Duryea Branch—The Stevens-Duryea company has opened a branch agency in Boston, with Charles Bowman in charge. He was formerly in the tire business and is well known in New England. The Stevens-Duryea cars were formerly handled by the late F. A. Randall. When he died last March his wife conducted the agency until the 1907 cars were disposed of, the factory people deciding to open a branch when the 1908 machines were ready for the market.

Fills a Big Order—The Whitcomb Auto Livery Co., of Cleveland, agent for the Rambler, performed the rather remarkable feat of furnishing seventy-five cars for a convention of sheet metal workers held in that city this week. The association wanted to take out the entire delegation and appealed to the chamber of commerce for aid. The chamber expressed doubts as to its ability to secure that many cars until the Whitcomb company agreed to furnish them. This is the first time that a convention of 250 to 300 members has been accommodated with a motor ride about the

city. Mr. Whitcomb performed a similar feat last year, when he furnished fifty cars and drivers after all the other liverymen had turned down the business.

Opens at Atlantic City—The Penn Motor Car Co., which handles the Mitchell car in Philadelphia, last week opened a branch house in Atlantic City at 245 North Massachusetts avenue. Manager Walter Cram, who is at the head of the Philadelphia concern, will also look after the Atlantic City venture, dividing his time equally between the two establishments.

New Factory Going Up—The Standard Welding Co., of Cleveland, is making good progress in the erection of its new plant in that city. The new establishment is located on the Lake Shore railroad, between West Seventy-fourth and West Seventy-sixth streets. The buildings will cover 1½ acres of ground. A power station which will supply 1,000-horsepower for the numerous welding machines and machine tools is being erected.

Electrics in South America—F. A. Babcock has closed a deal with Eugenio Dahne, of Porto Alegre, Brazil, by which Mr. Dahne becomes agent for the Babcock in that country. Mr. Dahne was the commissioner from the Brazilian government to the world's fair at St. Louis. He is enthusiastic over the possibilities of the motor industry in his country, and thinks that because of the excellent roads that are found in every section the electric will steadily increase in popular favor.

Importers' Show Decorations—It is understood that the show committee of the Importers' Automobile Salon has settled upon the style of decorations and general plans for the arrangement of the importers' show, which is to be held at Madison Square garden, New York, beginning Saturday, December 28. Carlton R. Mabley, the general manager of the salon, states, however, that no public announcement of the plans will be made until several members of the salon now in Europe shall have returned and passed upon the decision of the committee.

Emil Grossman Home Again—Emil Grossman, president of the Motor Car Equipment Co., the National Sales Corporation, of New York, and the International Sales Corporation, of Paris, who left for an extensive European trip on May 23, returned on the Kronprinz Wilhelm on August 6. While in Europe he visited the factories of Pirelli & Co., Milan, Italy, makers of Pirelli tires and ignition cable; Peugeot Brothers, Valentigney, France, makers of the Peugeot motor cycles, chains and rims; several of the most important car factories, and many manufacturers of sundries and parts. Mr. Grossman closed exclusive selling agencies in France, Italy, Germany, England, Russia, Sweden, Denmark, Belgium and Holland for the line of goods handled by the National Sales Corporation, comprising

Connecticut coils, coil current indicators, gasoline gauges, etc., Soot-Proof plugs, Corcoran lamps, Hercules shock absorbers, Conover wind shields, P. D. Q. tire repair plugs, etc.

Finds a Location—The Western Motor Car Co., of Chicago, the new agent for the Stearns in Chicago, has found an opening on the row, securing the old quarters of the Buick at 1414 Michigan avenue.

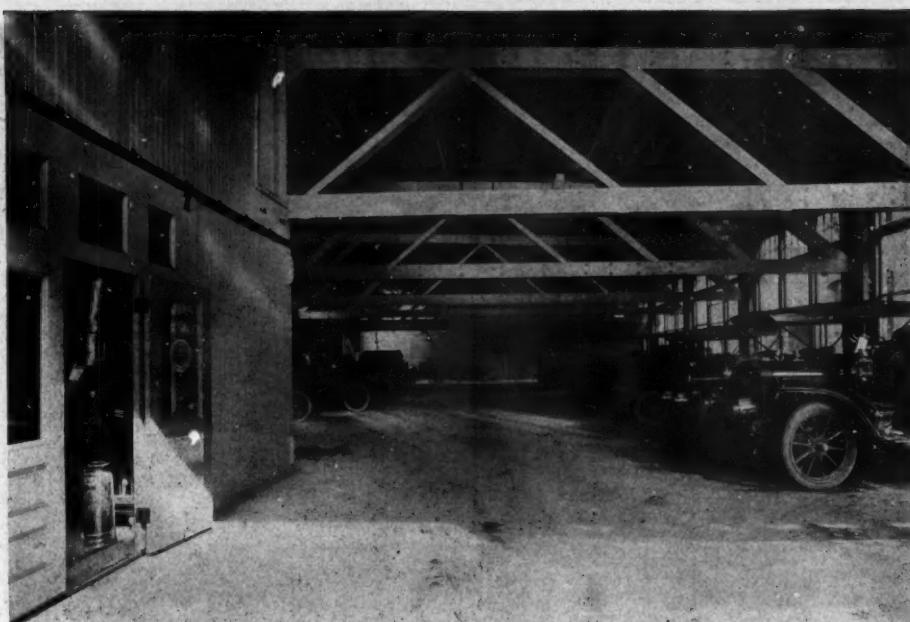
Holsman Offices Moved—The Holsman Automobile Co., of Chicago, has moved its offices from the sixth to the fourth floor of the Monadnock block, where it will have the entire end of the building, with more than double its present floor space.

Rush Newcastle Plant—Work toward getting the new Maxwell-Briscoe plant at Newcastle, Ind., in running shape is going forward with remarkable rapidity. It was only a little more than a month ago since the cornerstone was laid, yet a great deal of machinery already has been installed and the machinists are now being put to work. In less than a month the factory will be running with a force of 600 hands, it is said.

After Good Lines—The Calhoun-Bancroft Co., 506 Third avenue, Seattle, Wash., writes Motor Age it is seeking additions to its line as manufacturer's representative on the coast, desiring accessories and particularly ignition appliances. It already represents the Connecticut Telephone and Electric Co., Vesta Accumulator Co., Progressive Mfg. Co. and the Hercules Auto Specialty Mfg. Co. It wants something that will not conflict with these.

Hood Moved to Washington—Wallace C. Hood, who has held the position of sales manager of the Motor Car Co., of Baltimore, has taken charge of the Washington branch of the company at 1315 New York avenue. Mr. Hood, not being satisfied with his 100-mile record of 2 hours 12 minutes at the Benning track in a 60-horsepower Thomas stock car, has announced his intention of going after the world's record of 2 hours 10 minutes made on the Readville track Memorial day.

New Garford Car Company—W. B. Hurlburt has completed the organization of the corporation to be known as the Garford Motor Car Co., of New York, to sell the Garford car manufactured by the Garford company, of Cleveland and Elyria, O. The Garford Motor Car Co., of New York, is incorporated for \$300,000 and has as its officers: President, W. B. Hurlburt; C. R. Teaboldt, assistant manager, and S. J. Wise, sales manager. The first deliveries will probably be made about September 15. There will be two models, one a 24-28-horsepower, the other a 40-horsepower. The 24-28-horsepower will be especially adapted for city use. The larger model will be almost an exact duplicate, with the addition of more wheelbase and considerable more power. The new company has leased the entire building at



INTERIOR VIEW OF GARAGE OF GEISEL AUTOMOBILE CO., OF SPRINGFIELD, MASS.

Forty-fifth street and Broadway, formerly occupied by the Packard Motor Car Co., of New York, and will occupy it September 1, or as soon before that time as alterations now under way may be completed.

Enforcing Blue Laws—New York's motor car blue laws, which require the closing of supply stores on the Sabbath, and which were strictly enforced by the police last Sunday, caused no end of inconvenience and complaint in Manhattan motordom.

Ball Gets Garden Contract—The show committee of the Automobile Importers' Salon has awarded the contract for the decoration of Madison Square garden to the S. R. Ball Co., which presented plans in competition with two other concerns. This company was responsible for the decorations at the last licensed show and also those at Atlantic City last week. The committee has decided to arrange a special fete for New Year's day and to set apart Tuesday and Friday as dollar days.

Rush Building Job—One of the speediest building contracts ever completed in Indianapolis promises to be that of building the plant of the Overland Automobile Co. The contract provides that it shall be completed in 6 weeks and building has just started. David M. Parry, of the Parry Mfg. Co., which makes buggies and other horse-drawn vehicles, is also president of the motor car company. The plant is to be located on ground adjoining the buggy factory, and along the banks of White river. It will be completed and occupied about September 15. The building will be a one-story structure, 304 by 80 feet, built of wood, lined with paper and covered with iron painted black to withstand weather. Later a building of steel and brick will probably be built for the motor car factory. It is stated that the Overland will make a very different appearance in 1908 than it did this season. The en-

gine, it is understood, will be a four-cylinder of 20 horsepower, the completed car to weigh about 1,600 pounds. A new steering wheel that will rest in the driver's lap will be a feature.

Tire Concern Growing—The W. D. Newerf Rubber Co., coast representative for Goodyear tires, has had such an increase in business during the past year that it was necessary to incorporate with a capital stock of \$100,000, fully paid up. This company has its headquarters in Los Angeles, but recently opened a new store in San Francisco. A store was also opened in Fresno and agents appointed in San Diego, Riverside, Portland, Seattle, Honolulu and many smaller coast towns. Al Leonard is the head of the San Francisco house and George Ehman is the Fresno manager.

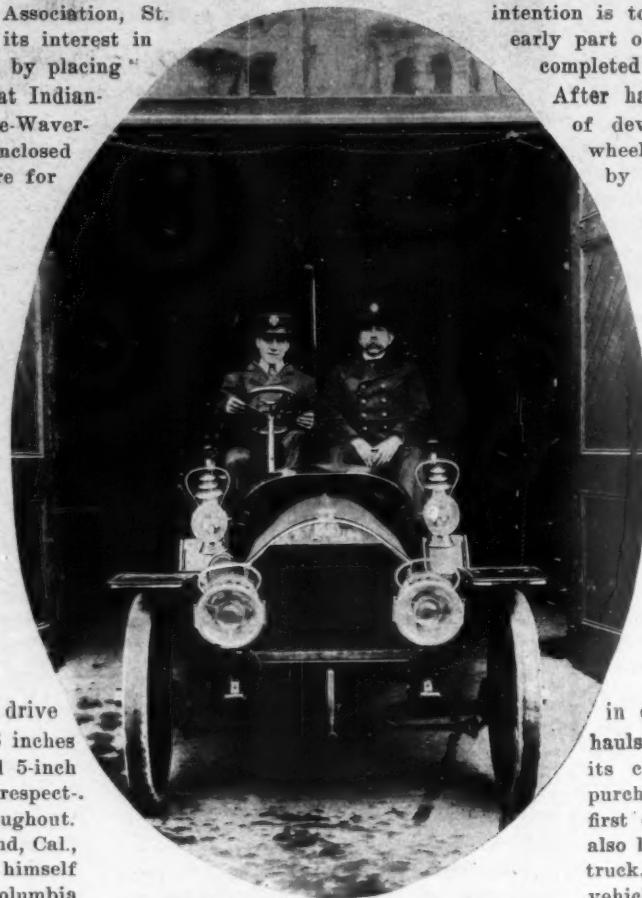
Cup for M. J. Budlong—When Milton J. Budlong, former president of the Electric Vehicle Co., left Hartford he took with him a testimonial from the employes of the company that he will always cherish. It was a loving cup of silver 12 inches high, mounted on an ebony base, the ornamentation scheme being twining ivy. Every one of the employes of the company placed his name on the subscription list, and this, too, stained with oil as it was because of the men signing it while at work, was given to Mr. Budlong. He was much affected with the gift and after its presentation to him he was called on to make a speech by the men who for 4 years worked under his guiding direction. When he finished he was loudly cheered and then he shook hands with each man. The cup is inscribed with the monogram "M. J. B." on one side and on the other it says: "Milton J. Budlong, from his friends and associates in the Electric Vehicle Co., July 31, 1907." Mr. Budlong has sailed for Europe and he has not made any definite plans for the future.

THE REALM OF THE COMMERCIAL CAR

THE Anheuser-Busch Brewing Association, St. Louis, Mo., once more proves its interest in electric vehicles for delivery work by placing with the Pope-Waverley company at Indianapolis an order for fifteen of its Pope-Waverley electric delivery trucks of the enclosed style. Of these fifteen thirteen are for use in and around St. Louis and the remaining two for operation within the grounds of the Jamestown exposition. The finish and appearance of the trucks are in keeping with their nature. The only entrance, which is at the rear, consists of double doors with a drop gate. The body design, conforming to plans furnished by the Anheuser-Busch association, accommodates the greatest load with the least idle space. The motive power is furnished by forty-two cells of fifteen-plate battery and two 80-volt motors with double reduction gearing. The motors are hung from the chassis and connected through the countershaft by chain drive to the rear wheels. Wheels are 36 inches in diameter and fitted with 4 and 5-inch solid rubber tires, front and rear respectively. The cars are well made throughout.

Nicholas Ball, chief of the Oakland, Cal., fire department, has purchased for himself a 24-horsepower four-cylinder Columbia runabout, which he uses in making runs to fires. With his new car the chief is now able to make record runs, appreciating the fact that the motor car is the only mode of locomotion that will enable him to arrive at a fire in the shortest possible time. The car is in every respect a stock model, and has the regular touring car equipment throughout.

Instead of testing its 3-ton model S



CHIEF NICHOLAS BALL IN HIS COLUMBIA

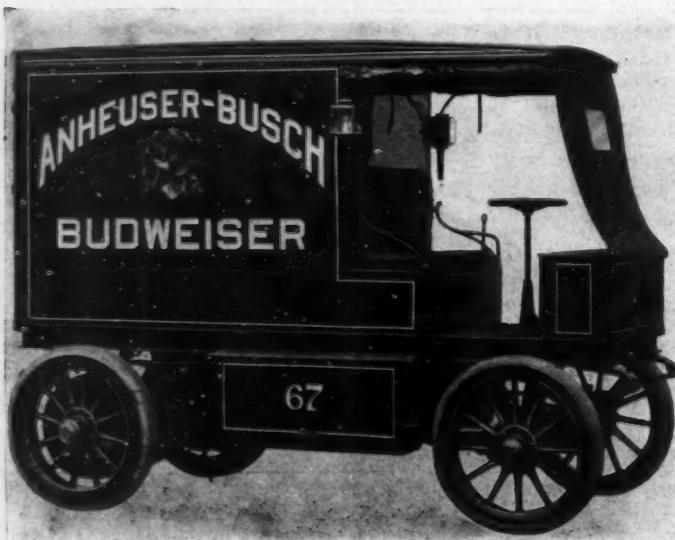
truck with its stipulated load, the Logan Construction Co., Chillicothe, O., has preferred to load its wagon with 7,160 pounds, consisting of stones, rock, old metal and other material. With this load it has been run over the roads in its home locality and has a claim made of taking 21 per cent grades loaded. The company's

intention is to put this truck on the market the early part of 1908, by which time it will have completed its probationary or testing period.

After having passed through several years of development and evolution, the four-wheel drive electric truck manufactured by the Couple-Gear Freight-Wheel Co.,

Grand Rapids, Mich., has, during the past 10 months, had an opportunity to demonstrate its prowess to the transportation public of one American city. Two of the oldest machines of this type operate in Chicago, one for the Western Electric Co. and the other for the north works of the Illinois Steel Co. The Western Electric truck went into commission in September, 1906, and has been in continuous service, doing depot work ever since. This truck carries a nineteen-plate M. V. Exide battery, which was cleaned for the first time about the middle of June after 8½ months' service. The Illinois Steel truck,

in operation practically the same time, hauls steel from the company's mills to its city customers. This company also purchased a second truck in April. On the first of April the Crane Co., of Chicago, also began the operation of a Couple-Gear truck. Casual observations of these several vehicles during the hours of operation prove the claim of great load-carrying capacity set forth by the makers. None of them makes fast time, due partly to the congested portions of the city streets in which they operate, also to the heavy loads carried and, further, to the poor condition of the streets. The practicability of electric machines for concerns of this nature is quite evident, as none of the runs is very long, and where a truck travels from



ONE OF THE FIFTEEN ELECTRICS FOR ANHEUSER-BUSCH



CHARLESTON'S FIRE CHIEF IN HIS BUICK TOURING CAR



LOGAN'S 1908 TRUCK LOADED WITH 7,360 POUNDS ON A TEST RUN

the home plant to the depot it is possible to recharge while loading or unloading. The particular advantage of the electric truck in this field of operation is its simplicity of control. The buyers realize this and it seems to be one strong point with them that one of the horse drivers can operate the truck with ease. This is an indisputable fact, but it must not be overlooked that while the control of these vehicles on the streets is simplicity itself their batteries should receive that careful attention that every battery in electric vehicles demands and which it must have if the vehicle is going to be a continuous and permanent success in this and other fields of limited extent in the larger American cities.

There is used by the New Dom hotel of Hartford, Conn., a traveling men's house, an improvised motor bus. It is an out-and-out improvised affair, but a very satisfactory and efficient one. The hotel does a good business, making a station bus an absolute necessity. Formerly a two-horse team was used, which was later supplemented by an electric bus. The latter, while efficient, could not cope with the increasing trade because of lack of speed. A gasoline vehicle was therefore installed. The chassis is of Pope-Robinson construction of channel iron. The body was built in Hartford. Side seats are arranged along the interior of the body and accommodate twelve ordinary or medium persons. Entrance is through a commodious door at the rear and the step underneath is of generous proportions. The motor has four cylinders and is rated at 40 horsepower, cylinders being cast separately. Ignition is by jump spark,

although the motor was originally equipped with a make-and-break. The cam shafts are carried at the sides of the cylinders and the valves are on both sides of the engine. The exhaust passes direct into a muffler at the base of the crankcase. Drive is through double side chains; there are three speeds and a reverse. Spark and throttle control is by hand levers conveniently arranged, while changes of speed are accomplished by the customary hand lever, the emergency being actuated in the same manner. The radiator is of the type common a few years ago on the French Panhard and the water tank is suspended from the body of the car between the front and rear wheels. The wheels are of wood and the tires of solid rubber 32 by $3\frac{1}{2}$ inches. The road traversed is asphalt all the way to and from the station. The vehicle was installed on April 13 and up to date has not cost a cent for repairs, while the daily running expense is but \$1. A speed of 35 miles an hour is possible and the car is very flexible while under way.

The Charlestown, S. C., fire department,

not to be behind its northern neighbors, has furnished Chief Behrens with a four-cylinder 24-horsepower model H. Buick car, in which he can answer all fire calls as well as look after his general outside duties. The car is equipped with special fire appliances, such as chemical extinguishers, axes, lights, gong and other markings to distinguish it from a private owner's car. It is painted a fiery red and creates a sensation while running through the streets at full speed. This is the third car the department has had, the former two being used to prove the efficiency of motor cars for this particular work.

Bulgaria, a small European country as yet untouched by the motor car trader, has some hundreds of miles of good roads. In Sofia, the capital, there are but eleven motor cars, of which three are Mercedes cars belonging to the Prince Frederick, four French rigs belonging to private owners and to the postoffice and one German car. The Germans are organizing a campaign for pushing cars and a Bulgarian commercial company has been formed. The drivers of these cars are brought from Berlin. There are no real motor car dealers as yet established in Bulgaria. Gasoline is cheap, being imported from Roumania, close at hand. There are no regulations concerning motor cars, and the duty is only \$50 a car. Four-seated cars appear to be the most suitable for the local conditions owing to the roads.

A general meeting of the Swiss Motor Car Exploitation Co., which was formed to run commercial motor cars in Switzerland, has decided that the enterprise should be liquidated. It had a share capital of \$25,000 and had been floated.



THE NEW DOM IMPROVISED HOTEL BUS



FROM THE FOUR WINDS



More Roads Ordered—The board of supervisors of Onondaga county, New York, have ordered four new state roads in the county to cost \$240,400. Plans for all the roads call for a trap rock or syenite surface.

New A. M. C. M. A. Member—The Dayton Motor Car Co., maker of the Stoddard-Dayton car, has been elected to membership in the American Motor Car Manufacturers' Association, and will exhibit in the association's space at the Grand Central palace show which opens October 24.

More Peerless Postal Cards—In reply to numerous requests which have been received by the Peerless Motor Car Co. at Cleveland for sets of the postal cards distributed during the Glidden tour to the tourists and to guests at the various hotels where the tour made night stops, the company has had a number of these sets prepared and will send them to anyone who is interested upon written request.

Saves Boy's Life—Charles Howell, of the Boston agency for the Columbia, with one of the 24-28-horsepower cars of that make saved a lad's life a few days ago at Taunton, where he went to deliver the car. While he was explaining the merits of the machine to its new owner a man rushed up and said his son had been kicked in the head by a horse, and needed medical attention. Howell piled the man into the car and drove to his home, where the boy was found unconscious. Placing him in the machine a dash was made for the hospital a few miles away and the lad carried to the hospital for treatment. The doctors said if it had not been for Howell's prompt action the boy would have died before he could have received medical aid.

Syracuse Tries Water Tar Oil—Water tar oil has been given its first test in the vicinity of Syracuse, N. Y., as a substance for laying dust and smoothing the rough edges of highways. A strip of road running by the Onondaga Golf Club house was oiled for a quarter of a mile and the experiment has proven so satisfactory that the Automobile Club of Syracuse may take up the project of oiling all the roads out of Syracuse. The Fayetteville road has been the worst in the vicinity of Syracuse and the club members were almost smothered with the dust from passing motor cars. The oiling experiment was conducted by A. D. Dudley, manager of the gas department of the Syracuse Lighting Co. He first had the road scraped and two barrels of water tar oil were applied with hand sprinklers. This did not have the desired effect. A sprinkling wagon was tried and between fifteen and twenty barrels of oil were used. The oil soaked into the road bed and the road was not

only clean but firm and smooth. The state fair commissioner has arranged to sprinkle with oil the boulevard, a favorite highway running from Syracuse to the fair grounds. He will also sprinkle with oil all of the streets on the fair grounds.

Delaware Making Money—The James-town exposition is proving quite profitable to the treasury of the state of Delaware. Up to the present time the Diamond state's purse has been enriched to the extent of \$3,000.

Long Motor Cycle Trip—One of the longest motor cycle trips out of Indianapolis was started August 12 by Ray Ridpath, Walter Berner and Charles Wyatt, of that city. The riders will go north, following the roads around the great lakes to Erie, and go from there to New York city. The cities through which the young men will go will be Fort Wayne, Detroit, Cleveland, Erie, Jersey City, New York, Boston and Springfield. They expect to complete the round trip by September 1.

Cheap Traveling—Those who labor under the impression that traveling by motor car is an expensive proposition will be interested in the list of expenditures compiled by D. E. Levy, a New York broker, which covers his recent 3,000-mile tour to Chicago and return. Mr. Levy drove his Matheson car and was accompanied by a party of five. The expenses for the 3,000-mile trip were as follows: Gasoline, \$51.39; oil, \$12.40; storage, \$13; washing, \$12; polishing, \$4.25; kerosene, 75 cents; total, \$93.79. The total of \$93.79 figures out 3 cents a mile, or 5 mills per mile for each passenger. In comparison railroad travel is not only much more expensive but lacks the advantage of complete independence enjoyed with motor travel.

Peerless Figures on Glidden—Figures compiled by the Peerless Motor Car Co. from statistics furnished by Charles Burman, who drove car No. 49 in the Glidden tour, regarding the consumption of gasoline during the tour and the hours of time consumed in running, have been made public. The compilation shows that the machine covered 1,583.4 miles. The time consumed by the car was 83 hours and 55 minutes, although the schedule time for the 12 days of running was 97 hours. Out of this total running time—83 hours 55 minutes—there was lost for mechanical adjustments 54 minutes and for other reasons, such as tires, putting on chains, filling with gasoline and enforced stops when the car caught the pilot car, 1 hour 43 minutes, giving an actual net running time of 81 hours 18 minutes. The average rate per hour of running for the entire tour was 19.47 miles per hour. During the tour there was used in the machine exactly 120

gallons of gasoline and the average for the big machine carrying four passengers was therefore 13.19 miles to the gallon. Figuring the average cost of gasoline at 20 cents, the cost per mile per passenger for the entire trip was \$.00379.

Plum for Lake Mahopac—On account of the recent burning of the Long Beach hotel, in which was situated one of the suburban club quarters of the New York Automobile Club, the series of sports and games arranged to be held there 2 weeks ago will be run off at the Lake Mahopac club house early in September.

Quick Tire Change—To decide a wager a few days ago G. A. Campbell, of the Boston branch of the Fisk tires, proved it was possible to take off and put on again one of the detachable rims within half a minute. A stop watch was held on him and the feat was accomplished in just 16 seconds to the great surprise of the onlookers.

Hastings to Ride Abroad—Theodore K. Hastings, of the Crescent Athletic Club, of Brooklyn, sailed on the St. Paul Saturday week to compete in the 6-day trial of the Auto Cycle Club of England August 19-24. His mount will be a twin-cylinder 4-horse-power Indian motor cycle designed by Oscar Hedstrom, of Springfield, Mass. The circuit to be covered in the trial starts and finishes in London.

Bay State Addition—Massachusetts has another motor club. It is the Malden Automobile Club and its headquarters were opened last Friday night for the first time. The club has a building on Florence street and it has eighty members. The officers are: President, Alvin E. Bliss; vice president, E. P. Beaudry; treasurer, Charles T. Small; secretary, Howard K. Frost. The club has a fine building of sixteen rooms, comprising three floors, and there is every convenience for the members of the organization.

Goddard Helps Tourists—Secretary Goddard, of the Cleveland Automobile Club, is doing a good work for tourists who desire to travel through Canada. Formerly it was necessary for tourists to give a bond for the return of the car, necessitating quite an outlay and requiring the owner to return from the same port where he entered. The Cleveland club has made an arrangement with the C. S. Warner Co., of Niagara Falls, whereby on application to the Cleveland club the owner can secure a bond enabling him to enter and leave Canadian points during the balance of the year, without further annoyance. The attractions of Niagara Falls and the fine roads through lower Canada have resulted in an immense amount of touring through that district this year and the knowledge

that the Cleveland club has such an arrangement has brought more than one tourist to Cleveland on his way to Canadian points this summer.

Will Meet in Newcastle—The Massachusetts State A. A. has decided on September 7, 8 and 9 as the dates for its meeting at Newcastle, N. H. It is proposed to have members of all the Bay State clubs compete in various events for 3 days and in the evenings there will be discussions on legislative matters and good roads, etc.

Youthful Expert—Word has been received at the Franklin company's factory at Syracuse that Roy Frankenheimer, of Stockton, Cal., aged 3 years and 8 months, is able to go through the entire act of starting a Franklin. With the small amount of strength which a child of his age possesses, he can turn the crank and start the machine, it is said.

Gothamites Plan Contests—The New York Automobile Club, formerly the City and Country Motor Club, announces that several contests of a technical nature and of a character new on this side of the Atlantic, will be arranged during the coming fall. The intention of the directors of the club is to hold these tests in New York city as far as possible, although there may be one run on the roads before the snow flies. To oversee these contests and attend to other matters of a technical nature a contest and technical committee has been named.

Teaches Ruffian a Lesson.—R. R. Ross, connected with the Boston Peerless agency, taught one of those miscreants who delight in throwing things at motorists a lesson a few days ago that he will remember. Ross with a party was out driving in the Blue Hills, when a man 30 years old deliberately threw a melon at him. Fortunately it struck him on the hand instead of in the eyes. It smashed and spattered all over the dresses of the women. Ross stopped the machine and caught the fellow. Not content with giving him a good drubbing, he held him until a policeman came along and the man was arrested. Next day in court he was fined \$5 and costs for assault.

Finds Many Good Roads—Governor Floyd, of New Hampshire, has just returned from a tour of inspection of some of the state roads that have been under construction this summer since the last legislature appropriated money for the maintenance of the highways. Along the Merrimac river north he found several sections had been considerably widened and improved between Concord and the lake regions. Further north, in the heart of the White mountains, he was surprised to see how well kept the roads were under the supervision of some of the hotelkeepers at Bretton Woods and Intervale. These men have spent a lot of money caring for the roads, so their guests who came in motor cars would find it pleasant traveling.

Governor Floyd promised to have the highway commissioners take up the work, so there will be a chain of fine roads throughout the state connecting with the good ones in Massachusetts.

Dragon After Record—A telegram received from Ernest Kelly at San Francisco by the Dragon Automobile Co. states that on account of delays from various causes the Dragon car which is to cross the continent in an attempt to lower the existing record from ocean to ocean did not start until that date, August 5. The car is now on its way eastward.

Fined for Not Stopping—The first fine assessed in Indiana for failing to stop a motor car when signaled to do so on a country road has just been assessed at Noblesville. Lawrence Elkus, an Indianapolis manufacturer, was arrested in that city on a complaint made by Augustus Clinton, a farmer. Clinton's horse was frightened, leaped down an embankment and was injured, while the buggy was damaged. Elkus was fined \$18.50.

Tour to White Mountains—One of the latest novelties in which motor cars are being used is a series of personally conducted motor tours from Boston to the White mountains. The plan was devised by a man who had been in the tourist business in Boston for some years and he secured some motor cars and started his outings. They proved very successful, and while a little more costly than a railroad tour, they give more satisfaction because stops may be made whenever and wherever the tourists decide.

Crafty Sheriff—A motor car was used for a unique purpose by Sheriff Eckensperger, of Lockport, N. Y., recently. The sheriff claims that as he was standing at a corner in that city he signaled a street car to stop. The motorman paid no attention to the signal, it is said, and ran by him for a distance of several hundred feet. While the sheriff was walking for the car it started up again. He then quickly engaged a motor car and gave instructions to the driver to catch the trolley. After a record-breaking run through the street the sheriff caught up. He paid the chauffeur \$5 for the engagement and the sheriff has now filed a claim against the railway for that amount.

Farmers Holler—With about the same effect as a red rag before a bull came the announcement that Supervisor Robert E. Gilman, of Syracuse, N. Y., as chairman of the good roads committee of the board of supervisors had spent about \$1,600 this season for motor car hire in going about the county and inspecting the roads. In vain does Mr. Gilman protest that he had to pay \$4 an hour for the rent of a machine and that the bills are all honestly incurred. The farmers say he should have hired a horse for \$3 a day and that he didn't need to do so much traveling around anyway. The result may be the purchase of a motor car by the county.

The county superintendent of highways, Frank E. Bogardus, has a car and the farmers are threatening to defeat him on this account.

Searchlights Barred—An ordinance passed by the Indianapolis city council a few days ago prohibits the use of blinding searchlights on motor cars within the city limits. There is but one exception—the police emergency car is allowed to retain its powerful light with which criminals are sought down dark alleys and in secluded spots at night. There is already a similar ordinance in the city which forbids electric traction cars from displaying such lights. The excuse for such an ordinance is fear that horses may be frightened. It has not yet been signed by Mayor Bookwalter.

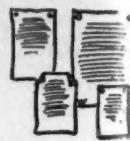
Clubs May Consolidate—It is understood the Indiana Automobile Club and the Indiana Motor Club, of Indianapolis, will be consolidated within a short time, thus making one of the most powerful motor organizations in the country. The Indiana Automobile Club is allied with the A. A. A. and expects to have 2,000 members by January 1, while the Indiana Motor Club is a strong organization, principally local, including owners of both cars and motor boats. Both clubs are seeking homes and it is argued that by the coalition of the two an imposing club house could be erected in Indianapolis.

A. C. A. Redeeming Bonds—The Automobile Club of America took possession of its new club house and garage on West Fifty-fourth street, New York, on April 18 last. On the first day of August, 3 months after its occupancy, \$20,000 of the second mortgage bonds were redeemed and canceled. Much satisfaction is expressed among the members at this evidence of the club's stability and progressiveness, and the governors are now planning to have at an early date in the fall a meeting of the club members for the purpose of burning the cancelled bonds. Further blocks of the bonds will be redeemed at short intervals. The membership of the club is increasing very rapidly and before the close of the year promises to reach the 2,000 mark.

Queer Record Run—The H. H. Franklin Mfg. Co., of Syracuse, has received word of a phenomenal run of a fire-damaged Franklin car from Seattle to Tacoma, Wash., in 2 hours 15 minutes. E. W. Dipple owns the car and made the run on a wager. The machine was one of three taken out of a fire in the Stimson garage at Seattle. The wheels were burned off and the floor and woodwork of the body were entirely consumed. The aluminum hoods and backs of the seats and body were badly melted and the whole outfit looked unfit for further use. Nearly all of the lower important parts were in fairly good shape, however, notwithstanding the terrible heat. The wager was that Dipple could not go to Tacoma and return in less than 4 hours in the damaged car.



BRIEF BUSINESS ANNOUNCEMENTS



Columbus, O.—H. C. Crum & Co. have taken the local agency for the Auburn.

Trenton, N. J.—Robert C. Manning has been appointed the New Jersey agent for the Peerless.

Philadelphia, Pa.—The West-Stillman Motor Car Co. has been incorporated with a capital stock of \$20,000.

Houston, Tex.—A new garage and selling agency will shortly be established here with a capital stock of \$25,000.

Milwaukee, Wis.—A. F. Eckstein, who was recently added to the forces of the Browne-Friend company, has started a department for the sale of second-hand cars.

Houston, Tex.—The Texas Automobile Co., with a garage at 614 Milam street, has been sold to F. L. Carroll, of Beaumont, and J. C. Locke and C. C. Belk, of this city. The new proprietors will continue at the old location.

Eagle Pass, Tex.—The Eagle Pass and C. P. Diaz Auto Line, which has been closed down for some months, will resume operations. At the recent meeting the following officers were elected: President, Dr. Boatner; secretary, M. Tautenham.

Detroit, Mich.—A new garage has just been completed at 1086-1090 Jefferson avenue by the City and Suburban Homes Co. It will be occupied by the Joseph Chene Auto Garage Co., a new concern. The members of the firm are Joseph Chene and Bert Allen, who were recently with the Standard company.

New York—Another dealer in carriages has joined the motoring field in the shape of the J. B. Brewster company, of Broadway and Forty-ninth street. This concern has made arrangements with the Acme Motor Car Co. to handle this car in New York. The new department will be under the management of George T. Gould.

Philadelphia, Pa.—Samuel S. Thornton and Lawrence C. Fuller, who have been the representatives for J. M. Quimby & Co., are about to enlarge their field of operation, and in the future will be the local agents for the Simplex, the Isotta and the Panhard cars. For the present they have a temporary office at 336 North Broad street.

Stamford, Conn.—The Rutherford Wheel Co., which manufactures the Rutherford pneumatic wheel for motor vehicles, is to establish a factory in this city. James G. Batterson, of New York, is the president of the company; J. J. Roche, vice-president and assistant treasurer, in addition to being the active manager of the company; J. R. Stanton, of New York, is secretary and treasurer. J. C. Rutherford, who is the inventor of the wheel, is the general manager, and A. E. Chappelle, formerly

with the Pope company of Hartford, is the superintendent.

Norfolk, Va.—A garage and machine shop is in course of erection at 548 Granby street for E. M. Jordan.

Salt Lake City, Utah—E. C. Coffin is having a garage erected in the rear of his residence at 661 East Second street, south.

Boston, Mass.—W. A. Moody, of 10 Columbus avenue, has secured the New England agency for the Comstock hydraulic shock absorber.

Philadelphia, Pa.—J. D. MacDonald, who has been connected with the local branch of the Rambler, has joined the forces of the Locomobile company.

Westfield, N. J.—W. H. Quackenbush has accepted the local agency for the Mitchell. Mr. Quackenbush already has the agencies for the Maxwell, Ford and Reo motor cars.

Boston, Mass.—B. N. Crockett has joined the sales department of the Northern Motor Co. This concern is the local representative of the Pullman and Pennsylvania.

Indianapolis, Ind.—A new plant is to be built at Oliver avenue and the west bank of the White river for the Overland Automobile Co., an enterprise controlled by D. M. Parry.

Philadelphia, Pa.—A permit has been granted for the erection of a three-story brick garage at Broad and Wood streets. It is to be erected for Louis Bergdoll, and will cost \$50,000.

New York—Lafayette Markle has resigned his position with the Corbin Motor Vehicle Corporation and in the future will be in charge of the sales department of the Oldsmobile.

Philadelphia, Pa.—Walter Dannehower has resigned from the Quaker City Automobile Co. He will take a short rest and will then join another local concern, the name of which as not yet been made public.

Hartford, Conn.—W. T. Winkley, who has been connected with the public city department of the Pope companies, is to give up this position and will be given another berth. In the future Messrs. Kelley and McManus will look after this department.

Newark, N. J.—A change has been made in the agency for the Ford. John E. Pye, of the New Jersey Motor Car Co., has sold his interest in four of the five counties to the Hygrade Motor Car Co., a new concern, and in the future Mr. Pye will handle the cars in Monmouth county only. The Hygrade company has leased the garage at 911 Hill street. The members of the new concern are Henry and James Hard-

man, the latter being formerly connected with the Hardman Rubber Co.

Woodland, Cal.—A new garage is being built for Van Zee & Bielar, the agents for the Buick.

Baltimore, Md.—Robert Garrett is securing estimates on a new garage to be built at Wyndhurst, on Charles street avenue.

Norwich, Conn.—The Connecticut Gauge Co. has been incorporated to manufacture speed indicators.

Flint, Mich.—Work on the new plant of the Buick Motor Co. is progressing rapidly and the brick work is almost completed.

Chattanooga, Tenn.—C. E. James, who recently bought the property at Chestnut and Eighth streets, will tear down the old buildings and erect a garage.

New York—A new garage is to be built at 561 Pelham avenue, the Bronx, by the Charles Setzer company. The new concern will have the agency for the Ford in the Bronx.

Milwaukee, Wis.—The Cutler-Hammer Mfg. Co., maker of electric motor controlling devices, has bought out the Wim Electric Co., and will continue the business of the latter concern, which was the manufacturer of battery-charging rheostats, field rheostats and similar apparatus.

Boston, Mass.—A new establishment is to be opened at 741 Boylston street, under the name of the Bostonia Motor Car Co. It is to be under the management of F. R. Pendleton, formerly with A. T. Fuller, and will act as the local representative of the Cartercar.

Darlington, S. C.—The Darlington Automobile Co. has been organized to deal in motor cars and motor supplies. L. R. Carrigan, D. T. McKeithan and W. M. Haynesworth are among those interested in the concern. A new building, now in course of erection on Exchange street, has been secured.

Houston, Tex.—George B. Nye and A. L. Salier, who formerly did business under the name of the Auto and Motor Boat Co., have dissolved the partnership, and a new company has been incorporated, to be known as the Auto and Motor Boat Co. of Houston, which has taken over the assets and liabilities of the partnership.

Springfield, Mass.—S. L. Taylor, of this city, is the inventor of a new tire which he claims is puncture proof, bullet-proof and skidproof. The tire is made entirely of steel, with only a piece of rubber tacked on the outer rim to deaden the noise. A company has already been incorporated under the name of the Taylor Tire Co. to manufacture the new tire and in all probability the plant will be located here,

though Buffalo, Albany, Oswego and several other cities are making offers.

Newark, N. J.—The Breeze Carburetor Co. has removed to 276 Halsey street.

Buffalo, N. Y.—The Maxwell-Briscoe company has removed to its new garage on Goodrich street near Main street.

Pontiac, Mich.—Work has been commenced on the plant of the Michigan Steam Motor Co., formerly the Belknap Motor Co.

Cleveland, O.—The new building for the Royal Motor Car Co., East Seventy-second street, will be completed and ready by September 1.

Woonsocket, R. I.—George Anderson, who has a garage in the building on Clinton flats, has been notified that he will have to move, as the building is to be torn down.

New York—A second-hand motor car company is about to start in business at 1661 Broadway. J. J. Evans, G. W. Condon and C. Prentiss Evans are the members of the new company.

Bowling Green, Ky.—A new garage is to be opened in the near future by Isaac Shuler. He has taken over the old livery barn recently vacated by Charles Cook and as soon as alterations are completed will open it up.

Atlantic City, N. J.—The Penn Motor Co., which has the agency in Philadelphia for the Mitchell car, has opened a branch in this city at 245 North Massachusetts avenue. The new branch will be under the management of Walter Cram.

Brooklyn, N. Y.—It has been announced that the Long Island Auto Supply Co. and the Sea Gate Equipment Co. will be consolidated. In the future the business will be conducted at 1249 Bedford avenue, under the management of James H. Vending and J. S. Wiese.

St. Louis, Mo.—It has been announced by the directors of the St. Louis Motor Car Co. that they have completed negotiations for a new issue of \$3,000,000 of 7 per cent preferred stock, which has been taken up by the Bank of France. At the present time the capital stock of the company is \$3,000,000.

Washington, D. C.—Work has been started on the new buildings for the Carter Motor Car Co. at Hyattsville. The site for the new buildings has been cleared, contracts for much of the material have been let and the trenches for the foundation of the buildings have already been dug by the contractors.

Houston, Tex.—John H. Kirby is the president and the largest stockholder in a new concern, which is to be known as the Empire State Motor Co. The new company is to have its headquarters in this city and will have sub-agencies in several other cities throughout the state. The concern now has the agency for two well-known cars and expects to close contracts

for several others in the near future. The capital stock of the company is \$25,000.

Middletown, O.—The firm of Omar & Williamson, with a garage on Canal street, has been dissolved. Mr. Omar has retired from the business, which in the future will be run solely by Mr. Williamson.

Newark, N. J.—A change has been made in the personnel of the New York Auto Top and Supply Co., of 286 Halsey street. S. Wolf, of this city, has bought out the interest of S. Simon, and will carry on the business himself in the future. Mr. Wolf was formerly connected with the

firm of W. J. De Wayne & Co., of New York city.

Hartford, Conn.—A new garage is in course of construction on Main street for L. M. Barnes.

Plainfield, N. J.—The Automobile Road Map Co., of 48 Albert street, has been incorporated with a capital stock of \$10,000.

Cleveland, O.—The American Auto Co. has filed a certificate increasing its capital stock from \$30,000 to \$50,000.

St. Paul, Minn.—Plans have been filed for the erection of a one-and-a-half-story brick garage on Summit avenue for George Freeman.

Pottstown, Pa.—The Chadwick Engineering Works, of Philadelphia, have started work on a new three-story brick building, on South Washington street, to be used for the manufacture of motor cars.

Philadelphia, Pa.—The board of directors of the Auto Transit Co. held a meeting and voted to increase the capital stock to \$2,000,000. According to Manager Hill the new building at Thirty-first and Dauphin streets soon will be completed.

Buffalo, N. Y.—It is said the Preston Hose and Tire Co. will establish a plant in Buffalo. The company is reported to have been incorporated with a capital of \$100,000. The tire which will be made by the new concern will be puncture-proof, it is said.

Los Angeles, Cal.—Ollier & Worthington, manufacturers' agents, is a firm recently organized to represent various lines of specialties and supplies on the Pacific coast. Both members of this firm are well known in the motor world. L. J. Ollier is one of the pioneers of the trade and has recently moved to the coast. A. P. Worthington for 3 years has been coast representative for one of the best known lines of motor cars.

Muncie, Ind.—A company has been launched in this city for the purpose of manufacturing motor cars, and it promises to become one of the strongest manufacturing concerns in the state. It is known as the Rider-Lewis Motor Car Co. and is capitalized at \$150,000. Directors of the company are: Will Rider, of Indianapolis; Ralph C. Lewis, George D. Rider, K. E. Stevenson and Hiram D. Lingle, of Muncie. Motor cars and accessories will be manufactured.

Detroit, Mich.—Charles Berg, who has been interested in the Citizens' Transit Co. and the Imperial Auto Co., has come to grief and receivers have been appointed for the two companies. Mr. Berg held patents for the manufacture of motor trucks and his plan was to organize a company to operate these buses. He had concerns in a number of cities, among them Chicago, Philadelphia, St. Louis, Cleveland, Pittsburg and Toronto, Canada, in addition to the two concerns in this city and the Commercial Electric Truck Co., of St. Petersburg.



Summit, N. J.—Summit Auto Co., capital stock \$100,000, will manufacture motor cars, motor bicycles, etc.

Dundee, Mich.—Wolverine Automobile and Commercial Vehicle Co., capital stock of \$28,000; to manufacture motor cars.

Brooklyn, N. Y.—Eclipse Automobile and Construction Co., capital stock \$30,000, to engage in the manufacture of motors, engines, machinery, cars, boats, vehicles, etc.

Newark, N. J.—Durham Engineering Co., capital stock \$10,000, to engage in the manufacture of motor cars and motor cycles, as well as doing a general engineering work. Incorporators, A. Durham and F. A. Reeve.

Worcester, Mass.—H. & T. Mfg. Co., Inc., capital stock \$30,000, to manufacture motor supplies. Incorporators, F. B. Early and R. D. Trayer.

Kenosha, Wis.—Earl Motor Car Co., capital stock \$25,000. Incorporators, C. Rohde, J. F. Burke and E. R. Hoffman.

Boston, Mass.—J. W. Bowman Co., capital stock \$25,000, to deal in engines, etc.

New York—Pneu "L" Electric Co., capital stock \$200,000, to manufacture horseless vehicles, motors, engines, etc. Incorporators, W. C. Button, Francis Fitch.

New York—Hewett Motor Truck Co., capital stock \$300,000, to manufacture motor trucks, motor omnibuses, etc. Incorporators, E. R. Hewett, A. F. Masury.

St. Louis, Mo.—Eureka Motor Buggy Co., capital stock \$5,000; to manufacture and deal in motor vehicles.

Trenton, N. J.—Pine Brook Auto-Stage Co., capital stock \$25,000; to operate motor stage lines. Incorporators, W. and George Kerris and J. E. Van Orden.

Newark, N. J.—Hygrade Motor Car Co., capital stock \$10,000; to engage in the manufacture of gas and gasoline engines, motor cars, etc. Incorporators, J. Hardman, Jr., and A. H. Osborne.

Weehawken, N. J.—Garage and Supply Co., capital stock \$2,000; to operate a garage.

Chicago—Dreadnaught Power Truck and Transportation Co., capital stock \$50,000; to manufacture motor trucks and do a general transportation business. Incorporators, A. A. Norton, R. F. Stern and M. J. Moran.

Lansing, Mich.—Barr Mfg. Co., capital stock \$15,000; to engage in the manufacture of motor parts.

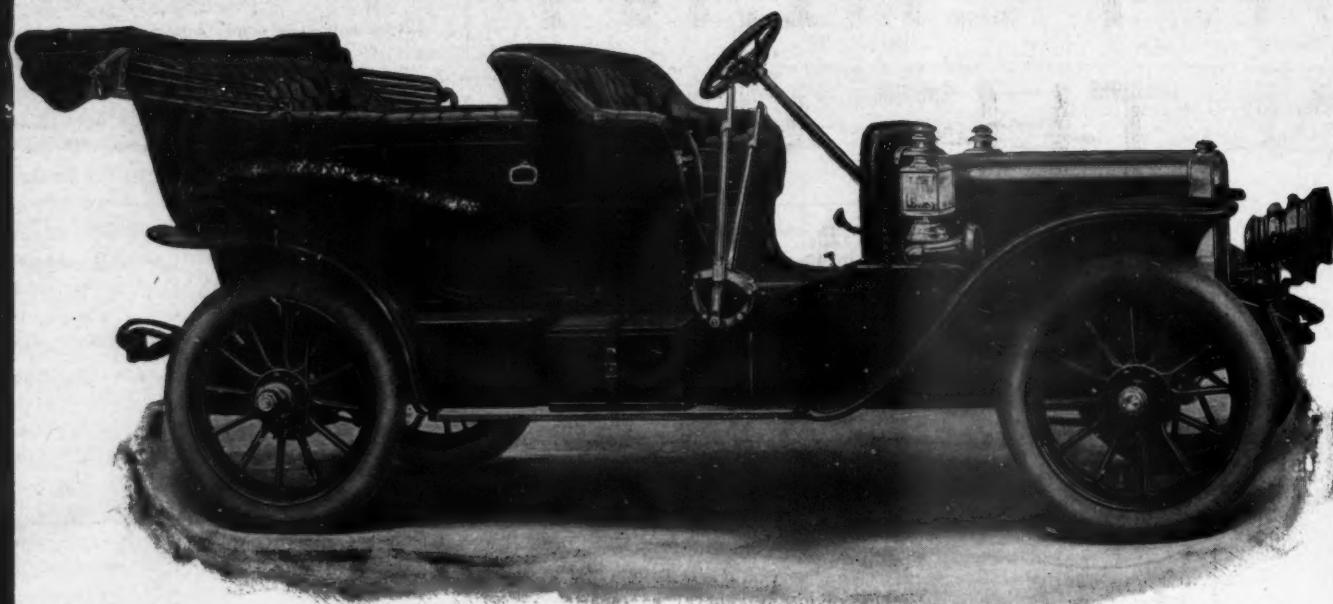
Chicago—Mentor Auto Sight Co., capital stock \$5,000; to manufacture and operate motor vehicles, etc.

Dover, Del.—Stepney Spare Motor Wheel Co., capital stock \$1,000,000; to engage in the manufacture of Stepney spare wheel motor cars, wheels of spare build manufactured under letters patent, as well as motor specialties of all kinds. Incorporators, W. H. Titis, of Excelsior Springs, Mo.; G. W. Kierstead, of Higginsville, Mass., and L. E. Broyles, of Kansas City.

Schenectady, N. Y.—Stevenson-Switz Co., capital stock \$10,000; to manufacture and deal in motor cars, etc. Incorporators, C. D. Stevenson, H. D. Switz and P. C. Stevenson.

New York—New York and Philadelphia Automobile Co., capital stock \$25,000; to deal in motor cars, etc. Incorporators, J. W. Spaulding, W. Y. Brown and J. M. Carrington.

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